No. 273 / NOVEMBER 1995

THE NEW INTERNATIONALIST

Flood of protest

Leave our rivers alone!

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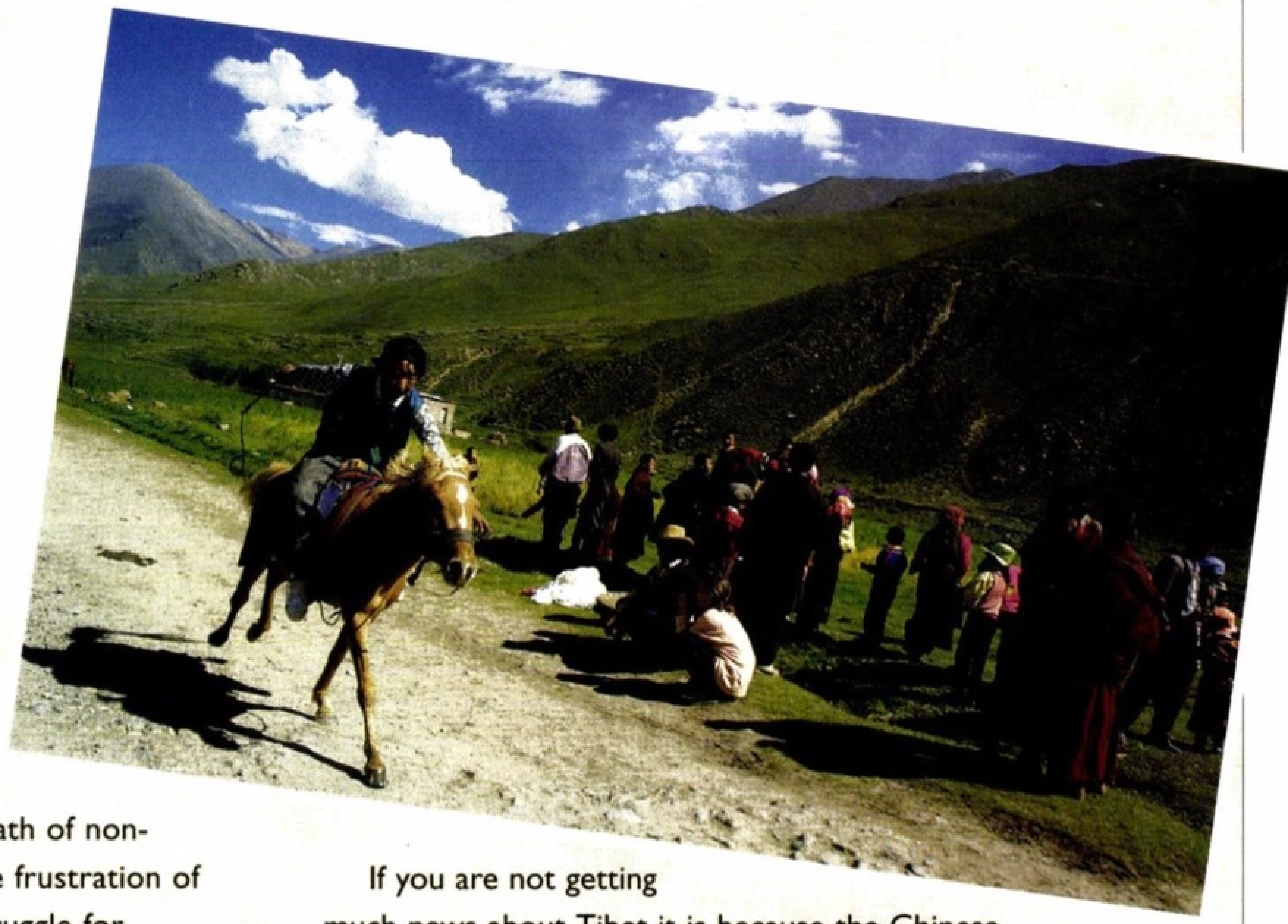
COMING NEXT MONTH

Tibet



VANESSA BAIRD

Tibet – the Shangri-La of Western travellers' dreams – is in trouble. For the past 45 years the mountain nation has been occupied by China. The iron fist of the world's most populous nation is getting heavier. Human-rights abuses are on the increase. Yet the country's exiled leader, the Dalai Lama, insists on a path of non-violence. Can he hold out against the frustration of Tibetans who see no end to their struggle for independence? Can the international community only hear the cries of oppressed people if they resort to violence? And if violence does erupt in Tibet what will be the consequences?

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Directed by Suzanne McCarthy and Christopher Jary

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- an analysis of the framework of British government
- the place for values within the civil service - integrity, objectivity, political impartiality, selection for entrance and promotion on merit, and accountability
- the case for, and effectiveness of, the British Government's programme of reforms

Main themes will include:

- what should be the role of government in the 21st Century?
- government and the media: the Whitehall perspective
- the changing civil service
- the Next Steps Programme
- efficiency versus accountability
- Citizen's Charter: customer or citizen?
- reforming local government
- public reform in other countries
- ethics in government
- financial accountability in government
- the role of the law

The programme will be of particular interest to senior civil servants and politicians involved in their own countries' programmes of administrative reform, or who are likely to be involved in such programmes in the near future.

Fee: £1,490 (inclusive)

Competition policy and regulation - 9641

3 to 13 June 1996
Manchester

Directed by Dr Paul Cook and Professor C Kirkpatrick

The seminar will provide a forum for policy makers in government, managers of parastatal organisations and public enterprises, and funding agency personnel to examine the major issues that surround reform of state sector enterprises and private sector development in a variety of economies undergoing structural change.

Main themes will include:

- industrial policy
- competition
- trade policies
- macro-economic policies
- legal and regulatory framework
- implications for institutional and organisational development

The programme will be of particular interest to policy makers and senior officials in government and those with an interest in devising policies for enterprise development and reform. These will include funding agency officials, development bankers, managers parastatal organisations and public enterprises earmarked for, or undergoing, reform. It is suitable for those involved in economic, financial and legal aspects of enterprise development.

Fee: £1,590 (inclusive)

How can democracy be sustained? - 9592

9 to 17 January 1996 *Colchester*

Directed by Professor Kevin Boyle and Stuart Weir

The seminar will expose participants to the principles that will allow a democracy to be sustained.

Main themes to be covered will include:

- principles and practice of democracy
- implication of the commitment to democracy for political systems - creation of parties
- participation
- socio-economic rights
- media and democracy - balance of reporting
- human rights and the rule of law
- the market democracy - degree of regulation
- minority issues - ethnic consciousness - pluralism
- women and democracy
- accountability

The programme will be of a particular interest to civil servants, journalists, politicians, and officials from non-governmental organisations with a political aim.

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The City of London: banking, finance and investment - 9623

12 to 24 May 1996 *London*

Directed by Professor Ian Morrison and Dr Maximilian Hall

The City of London is one of the world's three foremost financial centres. The aim of this seminar is to enable bankers and others from overseas to learn about its institutions and activities.

The programme will be of particular interest to executives from commercial banks, central banks and those from other financial institutions.

Fee: To be announced

Women working for change - 9629

10 to 18 September 1996 *London*

Directed by Professor Angela Coyle and Ms Reena Bhavani

The seminar will provide opportunities for participants to gain both theoretical and practical experience of approaches to policy development and the management of change in relation to women's matters.

Main themes will include:

- management of change
- strategies for women in development
- campaigning

The programme will be of particular interest to women working in management or policy development roles, from both the public service, non-governmental organisations or from campaigning groups.

Fee: £1,390 (inclusive)

Women and technology: making appropriate choices - 9551

7 to 17 May 1996 Brighton / Warwick

Directed by Marie Fry

The seminar will explore the range of options available for improving access to information to technology to make women's work more productive.

Main themes will include:

- agriculture, food production, storage and processing
- small enterprise development
- clean water and sanitation
- health and nutrition
- fuel and energy issues

The programme intended for administrators, planners, trainers and information officers concerned with women's programmes and involved in the dissemination of information to women in rural communities. It will be of special interest to people employed at the middle management level in government, parastatals, women's organisations and non-governmental organisations.

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Environmental technology: new developments and applications - 9625

21 to 27 April 1996 *Exeter*

Directed by Dr John Merefield and Dr Michael Heath

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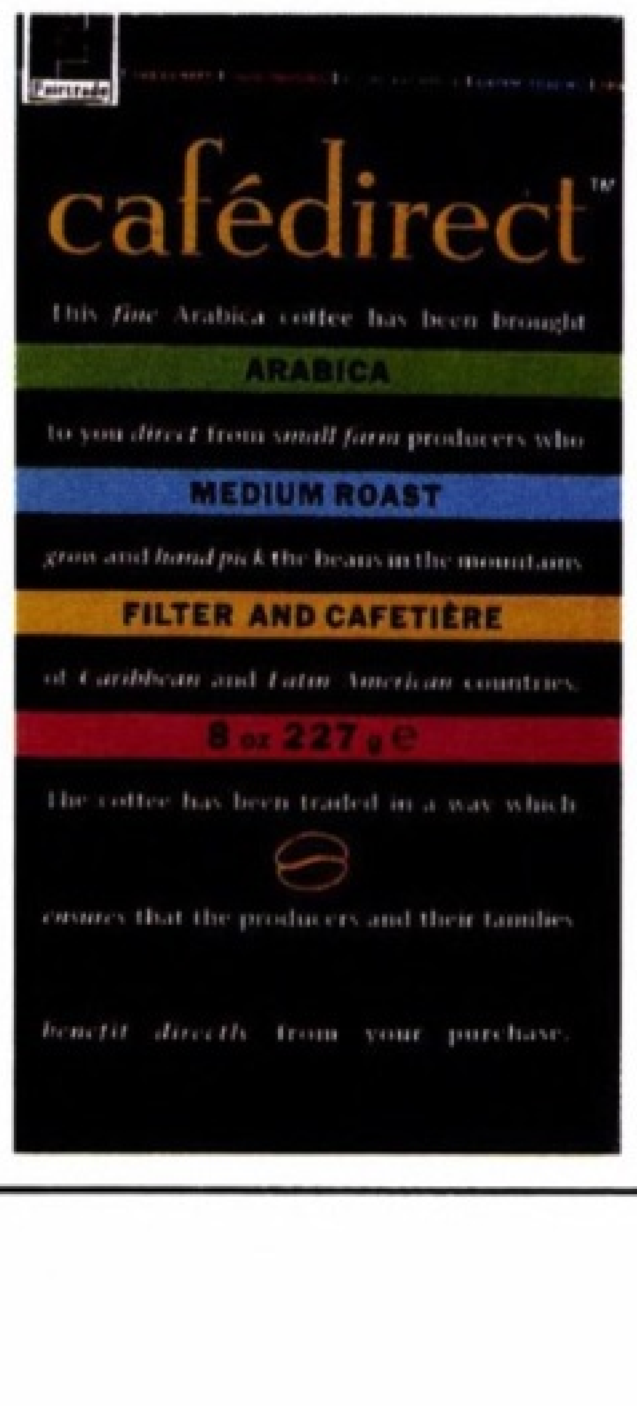
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CONTENTS

JEANETTE ANDREWS-BERTHEAU

Flood of protest – leave our rivers alone! 7

The new alchemists of engineering have become expert in turning water to concrete. ***Richard Swift*** *measures the costs to the world's rivers and their peoples.*

Current follies 11

Suggestions on why not to 'dam the river and full speed ahead'?

Rivers know no boundaries 12

Max Finkelstein *paddles Canada's wilderness Thelon River and Africa's mighty Zambesi in search of outer similarities and inner truths.*

Conversation with a maverick 14

Renegade water engineer ***Phil Williams*** *sounds off.*

One more river to cross 16

The dam-building business turns private and heads South. ***Catherine Stewart*** *is on its trail.*

RIVERS - THE FACTS 18

Tale of two rivers

Delta blues: the Nile 20

All is not rosy downstream from Egypt's Aswan High Dam. ***Karim El-Gawhary*** *talks to the farmers and fishers of the Nile delta.*

The Spirit Trap: the Mekong 21

The people of the islands of southern Laos who fish the Mekong for their living are worried. ***Gráinne Ryder*** *lends an ear.*

Simply - Kings of the water 24

Ping Ping and the Grannnd Projeccct 26

Mo Lu's *fantasy about how to treat spoiled kids.*

Dam-busters! 28

The people of the South are asking sharp questions of the master water-planners who claim the mantle of science and progress. ***Fred Pearce*** *sees the tables turning.*

Letters 2

Letter from Russia 3

Update 4

NI Interview with **Manuel Patarroyo** 31

Reviews: plus **Philip Glass** classic 32

Curiosities 34

Endpiece: by **Neil Christie-Ormond** 35

Country profile: Honduras 36

MAGAZINE DESIGNED BY **ANDREW KOKOTKA**
FRONT COVER BY **TRYGVE BØLSTAD / PANOS PICTURES**

THIS MONTH'S **THEME**

Rivers

FROM THIS MONTH'S **EDITOR**

Different topics I have ended up tackling as an **NI** editor have provoked different emotions. Some issues are motivated by anger at grievous injustice – the victimization of the world's poor, violations of human rights, the intellectual straightjacket of fundamentalism. Others are motivated more by a curiosity about how we look at history, what is appealing in architecture or how the tax system works. Rivers are a bit different, a bit closer to the heart.

I grew up beside the St Lawrence and as a school kid in Quebec City I used to sit on the Plains of Abraham with a tattered black notebook and an old pair of binoculars. My purpose was to log the ships with their strange and wonderful flags as they passed beneath that strategic citadel which had defended the river and French North America from all comers. Later I walked the shores of the Gaspe, wondered at the white flashing bellies of the Beluga whales at the mouth of the Saganuey and followed the broad St Lawrence through the maze of its Thousand Islands. When I saw the dead fish in the river or was told it was no longer safe to swim, it wrenched the heart.

Many of us are close to a river. It is a privilege that we need to cherish and a right that people around the world are increasingly having to fight to defend. It is surprising how much river language and metaphor infuses our culture. The **NI** office during this month's production was redolent with it – 'rivers' was flowing nicely, one argument was a 'red herring' another 'a diversion' and potential staff illness was 'rough water ahead.' Our new designer Andrew was 'taking the plunge' on his first issue. It is actually largely down to him if the beauty of the river combines well in this issue with the politics of river defense. These are both key parts to the story. It is hoped that you readers will not drown in the details of this issue but will be swept away by a current of concern over the fate of the world's rivers.

Richard Swift

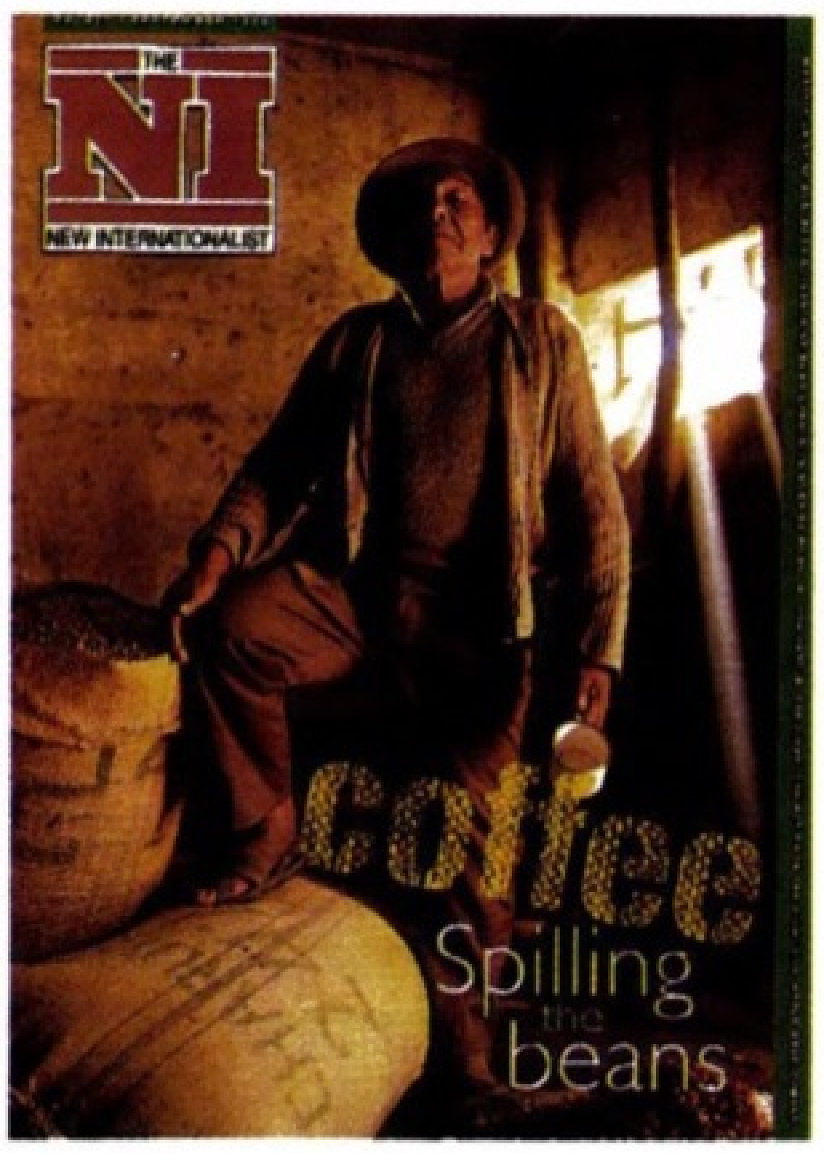
Richard Swift
for the ***New Internationalist*** *Co-operative*

Letters

The New Internationalist welcomes your letters. But please keep them short. They may be edited for purposes of space or clarity. Include a home telephone number if possible and send your letters to the nearest editorial office. The address is inside the front cover.

Coffee and conscience

In your magazine on *Coffee* you show how the public is starved of choice when it comes to buying fair-traded coffee. If this is the case, then the answer partly lies in making fair-traded coffee taste better. The public is unlikely to pay conscience money forever. If there are too many middlemen/women then the answer is to have producers' co-operatives in the South and consumers' co-operatives in the North which could trade directly with each other. If the problem is that the world price is too volatile due to weather or over-production then the answer lies partly in having a 'set-aside' policy and producers' co-operation for price stabilization. The co-operatives have about 12.5 per cent of the retail trade in the UK. What is the share of fair-trade products and how prominently are they displayed in Co-ops?



In the long run the answer is in product quality, good marketing, co-operation among producers and direct trade between well-organized co-operatives North and South. Not in conscience money.

Bim Prodhan
Oxford, England

Education rethink

In the central Fact Spread in your issue on *Women* (**NI 270**) you come up with just one statement on education. You say '90 million girls have no education at all...' This is, I would suggest, a very North-biased statement and culturally insensitive. Schooling does not necessarily educate someone very well, and just because someone has not been to school they are not 'uneducated'. They may not be able to read and write, but every girl and every boy in every culture receives education. Why is the North's concept of education as being given by strangers outside the family any more valid than the traditional values of the South where education is given within the family?

Perhaps one of the reasons why women are left out of development planning and the mainstream of so many activities is because we have a very North-oriented (and possibly male-oriented?) idea that education means schooling.

Perhaps you could show cultural sensitivity to the millions who could never read your magazine by rethinking the implications of using the word education in the conventional way.

Roger Sharland
Nairobi, Kenya

Disabled women

I felt dismayed when I read your issue on *Women* (**NI 270**) that you did not feature all women. I am a disabled woman and I experienced my invisibility as I read your material. Where am I? Where are disabled women globally?

To talk of oppression in its various forms across the world and omit a huge group of women who are oppressed is to represent only part of the debate.

My first emotion was one of anger but that was soon replaced with sadness. It seems we have reached 1995 and are approaching a new century and still disabled women do not see their experience expressed in magazines which should have more awareness.

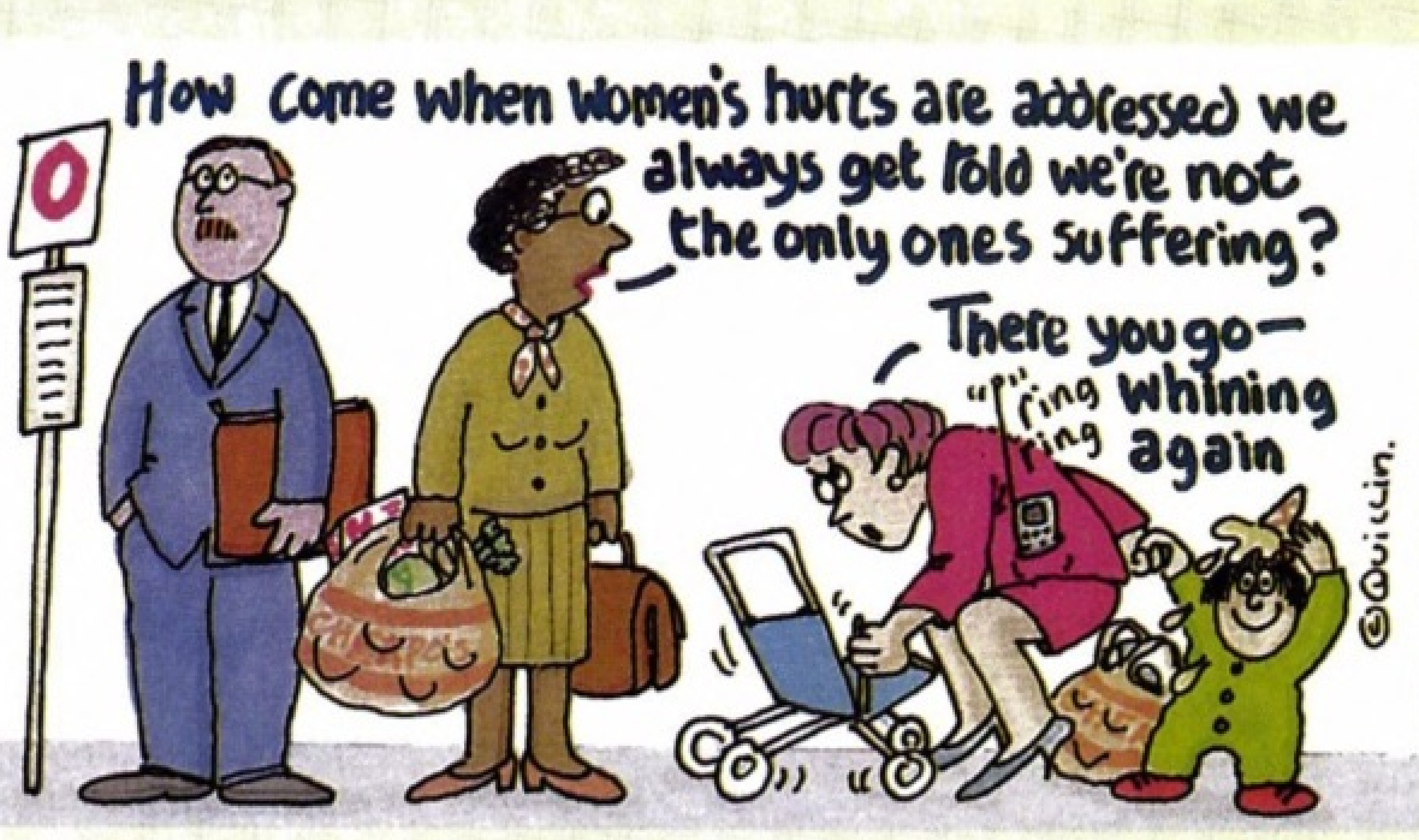
Sandy Slack
Witney, England

Revolting feminism

I find I cannot agree with your brand of feminism. I am and have always been a strong feminist in that I have always believed strongly in the value of women's principal role in our society, namely the bringing up of new members. For too many years now women have increasingly professed to find that vital and absorbing function beneath them. The results are around us for all to see – the growing alienation of the young and increasing youth crime. Also, while I have to agree that the lot of women in many other countries is far worse than here and must be addressed, reading your articles would lead one to believe that the wrongs of the modern world are suffered almost entirely by the women, which is patently untrue. One need only see the TV news. Are the refugees in former Yugoslavia only women? Of course not. War, like other disasters, both natural and human, affects us all.

Last night on the Bob Monkhouse show, he referred to female spiders eating the male after mating. Some women in the audience cheered and clapped. It is revolting. You seem to be on that side and I do not like it.

Avril Bingham
Whitchurch, England


How come when women's hurts are addressed we always get told we're not the only ones suffering?
There you go–whining again
"ring ring"
©Quillin.

VIV QUILLIN

Abortion

To most of the contributors to your issue on *Women* (**NI 270**) feminism presupposes support for abortion on demand. Surely there must be some feminists besides myself who feel that it is bad for the image of people who claim to support the human rights of the 'underbitch' to advocate the killing of people because their existence is inconvenient (like suttee widows?) After all, many people who are not at all feminist want easy abortion – not least men who want to escape the attentions of the Child Support Agency.

Please note that I don't condone violence against abortion practitioners any more than as a paid-up member of the RSPCA I would condone the antics of the Animal Liberation Front!

Eileen Davies
Oxford, England

Food weapon

I'm glad you made the point in your issue on *Hunger* (**NI 267**) that countries like Britain are not self-sufficient in food; I think the goal of becoming as near-independent as possible in this and other respects is important for morale, for the creation of employment and also for reasons of basic security. My friends in India sometimes quote the words of the former US Minister of Agriculture, Earl Butz: 'Food is a weapon' – and cite some machinations of the multinationals as an example.

Barbara Panvel
Solihull, England

Ok Tedi

I wish you would take an interest in the Ok Tedi mine in Papua New Guinea. Newspaper reports say that BHP, an Australian mining company which controls the mine, persuaded the PNG Government to pass a law which would criminalize any legal action seeking compensation for the environmental and health damage caused by the mine. The draft act even contains provision that legal action against the legality of the law itself would be a crime.

This infringes people's fundamental right to seek legal remedy for a damage imposed on them, not to mention the right to a sound living environment.

It is hardly necessary to mention the PNG Government's reputation in the brutal Bougainville conflict, which also involves copper mines.

Yutaka Kawasaki
Padbury, Australia

Sierra Leone

Could you please tell me why there seems to be no coverage of Sierra Leone in the **NI**? Here in Canada there is almost no media reporting of the civil war that is currently taking place.

The children of our school, through their Student Parliament, have been working with the staff and children of Port Loko Catholic Secondary School in Sierra Leone for the past three years. They have exchanged letters, photos and tapes, and most recently we were able to help them build a well. Last month we found out that 22 of the children had been taken hostage by armed rebels and that one child had been burned alive. We found this out in a letter the Principal managed to get to us, even though the Post Office had been destroyed.

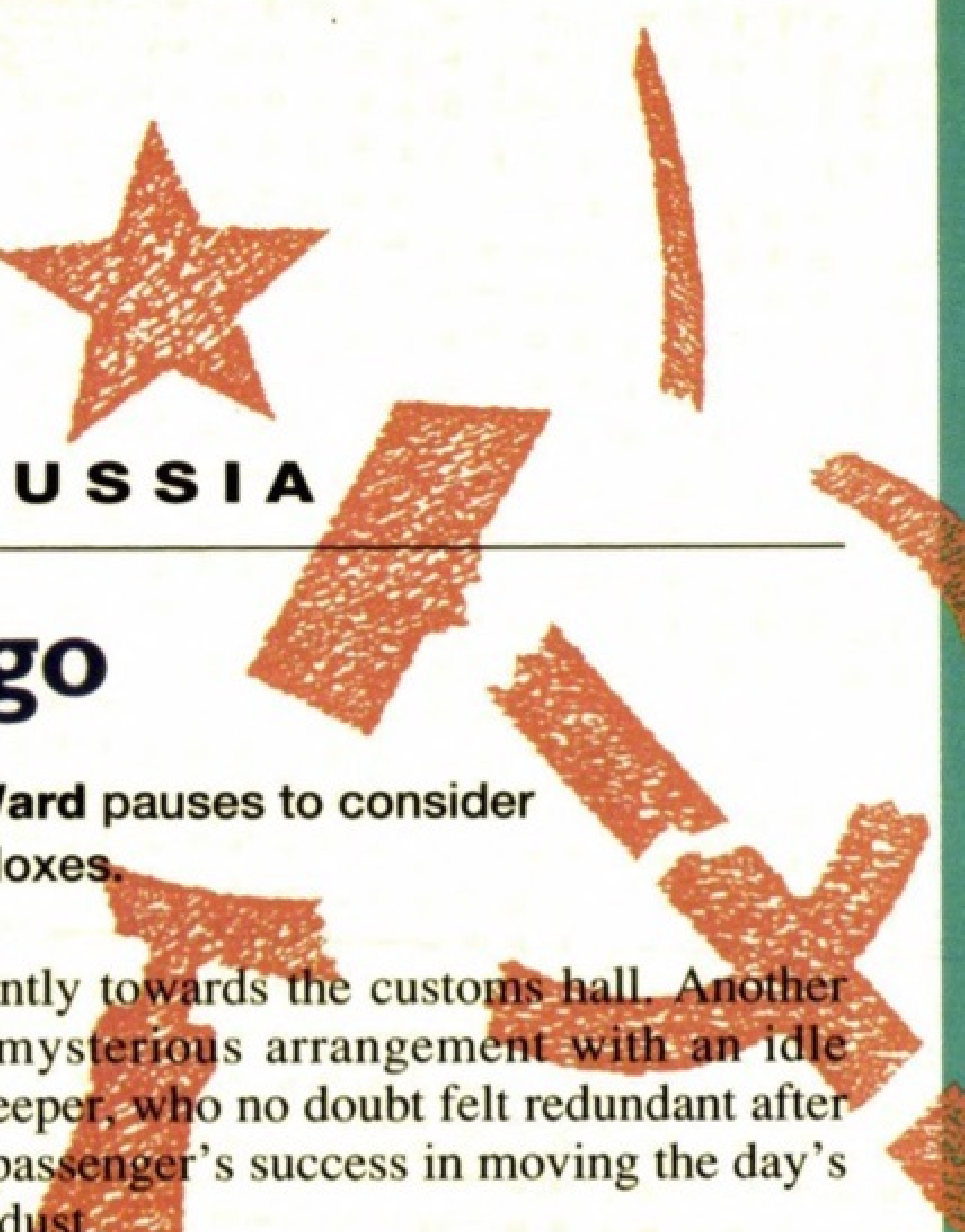
Please try to look at this small, desperately poor country and its wonderfully optimistic struggling citizens soon. They deserve your support.

Paul Delaney
Victoria Harbour Public School, Ontario, Canada

Ed: We are working on a Country Profile at this very moment!

Thanks to the many readers who wrote in with suggestions for future issues which will all be fed into the Co-op's discussions at our Annual Editorial Meeting. Thanks too to those who filled in the Reader's Survey – we had a large number of returns which will help us to make the magazine more as *you* want it...

The views expressed on the letters page are not necessarily those of the New Internationalist.



LETTER FROM RUSSIA

To boldly go

Returning to Moscow from holiday, Olivia Ward pauses to consider some great Russian paradoxes.

I PASS THROUGH the clean, well-lighted portal of British Air and enter a grave new world.

Of course I'm prepared for it. I've been in this country for three years, and no horrifying event is entirely unexpected. But for all that, there is something in the knees that quivers when venturing out into the dim, dank-smelling corridor that leads strangers into the vast double-continent of Russia.

I can understand how babies are disgruntled with the world from birth when they are delivered to the nasty, antiseptic rooms where people greet them with a hearty slap. Emerging in the twilight world of Moscow's international airport, Sheremetievo-2, one waits for the blow to fall.

Down we plunge, step by dirty step, into the prison-like pit where most élite travellers lose their identity and merge with the huddled masses. At the head of the crowd are tiny booths where young unsmiling clerks in military uniform sit glowering over the credentials of betrayed officials in the days of the great Stalinist terror.

Standing under an unblinking fluorescent bar affixed to the booth, I wonder if it is some sort of truth device, forcing me to babble whatever treasonous thoughts make me unacceptable for a stay in this country. Then, at the moment of despair, the miraculous sound of a metal stamp signals release.

It is not a blessed release, however, as I totter wearily into a dim baggage area that should carry a warning sign: 'All hope abandon, ye who enter here.'

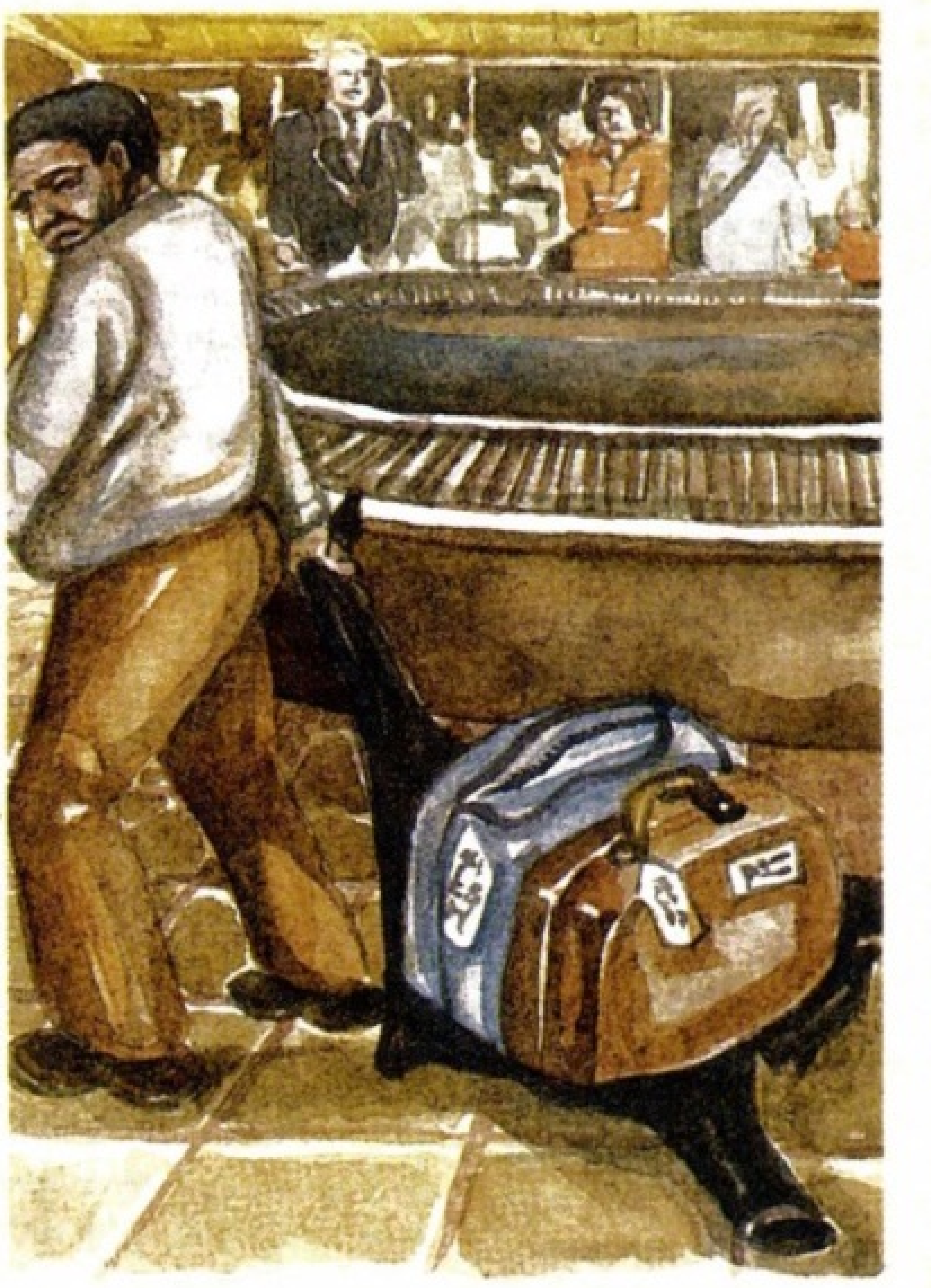
'No baggage carts' shrugged a clerk sitting in the corner where the ancient creaking objects used to be tethered like arthritic sled dogs.

There were no carts because the canny but energetic free-enterprisers who used to recycle them from the parking lot for a fat fee have been purged from the airport. Now a wonderful new system is to be installed. In the meantime another free-enterpriser has made off with the old ones, leaving people like me, with a year's supply of books, gifts and clerical supplies from abroad, to make the best of it.

All around me foreigners were wringing their hands, while Russians adopted the skilled stoicism of long history. One took off his coat and slid it under two heavy bags, dragging them triumphantly towards the customs hall. Another made a mysterious arrangement with an idle floor-sweeper, who no doubt felt redundant after the first passenger's success in moving the day's quota of dust.

The richest muttered into cell phones attached at the other end to the ears of their drivers who barged purposefully past customs officials to rescue their masters and mistresses.

But it was the general lack of fuss that impressed me most, as it always impresses me among beleaguered Russians. Communism, which did so much to take away initiative, also helped to create it in people whose backs were perpetually to the wall.



MIRIAM McCURDY

It's one of the great Russian paradoxes that a country brilliant enough to put men and women in space also puts them in a daily rage with the shoddiness of the consumer goods it turns out. The huge influx of imported goods is a vote of non-confidence in Russian products, which have nevertheless created generations of adept handy-persons.

For better and worse, the age of choice is dawning on Russia, and with it a new generation of people who expect something in life. Some day the children who wait in line with their parents in this dismal airport may be ushered through at a normal pace, with courteous service, real lighting and all the amenities of civilization. They may be less self-reliant but also less self- effacing.

This is my one comforting thought as I stand with my bulging bags, gathering breath to kick and shove them out into the crowded arrival hall built for the days when only the lucky few could travel.

Surfacing, I join the swirling mass of people struggling back and forth like a vision of the country today. Smart women in designer coats, rapacious taxi-drivers in reeking T-shirts, hard-faced entrepreneurs, elderly people blinded by the light as they emerge from the inner dimness.

We're all caught, pushing against each other, not knowing whether we'll ever reach our destinations. Behind us, the dark and the old. Ahead, we don't know what. The only choice is to keep going. To boldly go. ■

Olivia Ward is bureau chief for the *Toronto Star* in Moscow.

Update

PALESTINE

Bread and bullets

Acute malnutrition increases

THE ROAD TO THE VILLAGE of Irihiyya threads from Hebron through Al-Fawar refugee camp where children tussle, stirring up dust in the road, and out past fields of wilted sunflowers. In a lumbering van that struggles with the gentle hills of the southern West Bank, Aida Abu Laban arranges the papers in her lap expectantly and pulls a shawl over her short, chic curls.

Abu Laban is a health educator for Terre des Hommes, a Swiss aid agency running a nutrition programme in the villages around Hebron and in the Gaza Strip. In Irihiyya she clambers down a hill to the home of the Tobasi family, squats on the concrete floor, greets them with affection and asks to see her patient.

She undresses the youngest of the ten Tobasi children, Ahmed, and settles him on her scale. He is a little more than a year old. He has third-degree protein-calorie malnutrition and is 60 per cent below weight for his age. The three youngest children are all abnormally small and suffer from chronic malnutrition.

It is the children born after the closure of the Occupied Palestinian Territory in March 1993 who are stunted. It was at that time that their father was refused a permit to work in Israel and could find no other work. Since then the Tobasi family has been supported by relatives and neighbours.

'You know, it's not just that family,' says Abu Laban, gesturing to a crowd of children assembled to watch her departure. 'All of these kids, they're all the same. Nobody has enough to eat.'

Dr Adnan Al-Whahadi, medical supervisor at the Terre des Hommes clinic in Gaza, is quick to point out that malnutrition is not a new problem for the Palestinians.

'I'm not going to blame everything on the Israelis,' he says. 'Before 1948 [when the State of Israel was founded] we were not rich.' Poverty, traditional child-feeding and weaning practices, short birth intervals and a lack of health education have made chronic malnutrition a common problem in Gaza and the West Bank,' he says.

What is new is the level of acute malnutrition, which has been accelerating since the 1993 closure. 'In the past the Israelis used guns and bullets against us,' he continues. 'Now they are using different methods. Now it is insidious, a new way to punish us.'

'The mothers have the education, they know what to feed their children,' says Etidal Khatib, the clinic manager. 'But there is nothing in the house to give them. No-one is working.'

The Palestinian Economic Council for Development and Rebuilding (PECDAR) estimates unemployment at 35 per cent in the West Bank and 60 per cent in Gaza. Before the closure more than 120,000 Palestinians worked in Israel, while today only 25,000 hold precious work permits. PECDAR estimates the loss to the Palestinian economy, in wages and sales, at three million dollars a day.

'Even in the Intifada, things were not so bad,' says Amna Bidair. Her husband has been unemployed for eight months. Rocking her youngest child, who has the wizened monkey-face of severe malnourishment, she recalls that they used to get help from the 'social help people' – the welfare wing of Hamas. But when the Palestinian Authority assumed control of Gaza a year ago, they forced Hamas to stop its alms-giving. For seven months the Badair family has been eating rice and grape leaves.

Aida Abu Laban, back in the clinic in Hebron, isn't optimistic. 'We know that giving them food is not the solution,' she says. 'We have to find them a job. But there are no jobs; there are no other sources of income.'

The Palestinian Authority is promising better days when it assumes control in Hebron after the Israelis pull out of the West Bank. What will that mean for the children of Irihiyya? Aida Abu Laban laughs and turns away: 'Have you been to Gaza lately?' ■

Stephanie Nolen

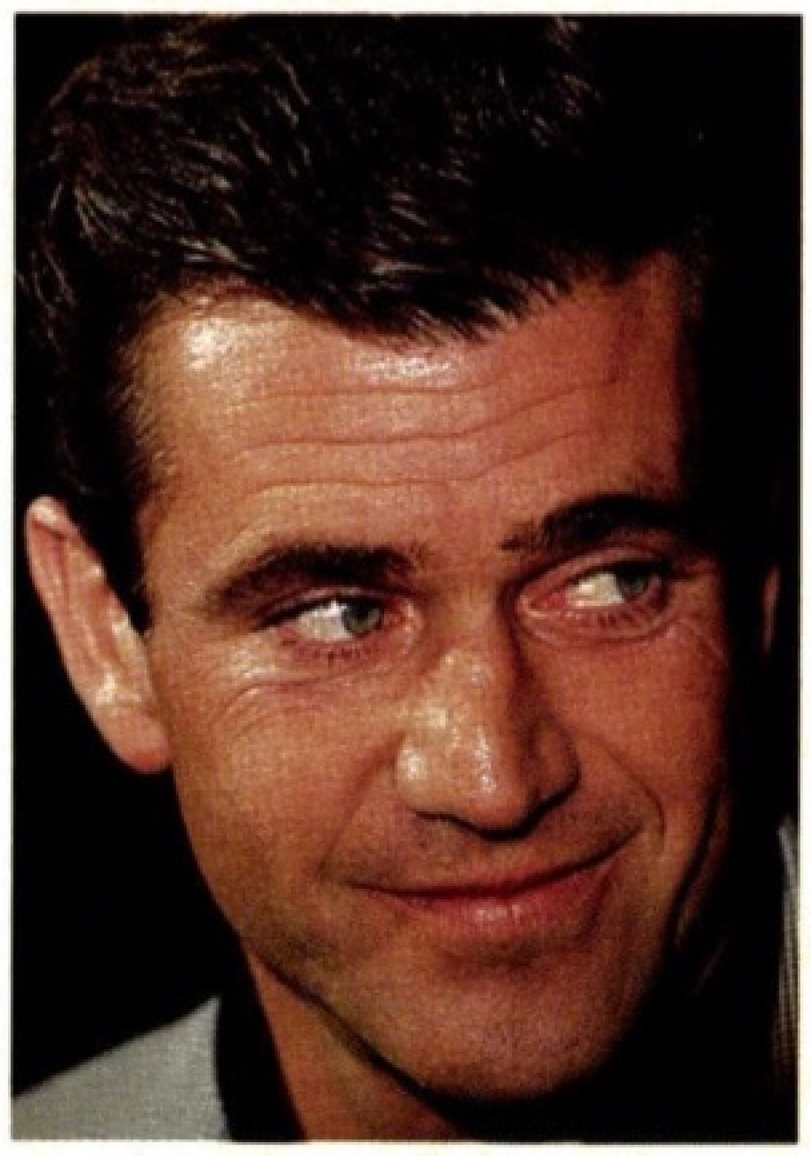
No work means no food for Palestinian families.

PHILIP HAWKINS / CAMERAPRESS

Cold footage

ONE DAY, the cinematic exploits of Mel Gibson, Peter Finch, Errol Flynn and other Australian film stars could be kept on ice in Antarctica. Film deteriorates unless it is kept in cold, dry conditions, and Australia's National Film and Sound Archive in Canberra believes there is no better spot for it than the world's coldest and driest continent. The archive would like to store historic footage – dating back as far as 1896 – in insulated shipping containers at one of Australia's four research bases in Antarctica. Australia's oldest footage was filmed at the Melbourne Cup in November 1896.

New Scientist, no 1987



CAMERAPRESS

Mel Gibson: on ice.

Price of life

A REPORT FROM THE UN Intergovernmental Panel on Climate Change (IPCC) on the social cost of global warming has valued the lives of people in rich nations up to 15 times higher than those in poor countries. The valuations are based on assessments of a community's willingness and ability to pay to avoid the risk of death. Delegates to the IPCC from India, China, Brazil, Cuba and elsewhere vetoed a summary of the work. It was to appear as a chapter in the Second Assessment Report, the IPCC's first full report on the science of climate change for five years.

New Scientist, no 1991

ET

THE GOVERNMENT OF INDONESIA has promised to remove a stigma from the identity cards of former detainees. At the last count – in 1992 – 1,352,896 people had their cards stamped with the letters 'ET', short for *Eks-Tahanan-politik*, or 'former political prisoner'. They have been subject to restrictions and discrimination. The concession may, however, be cosmetic. Soesilo Sudarman, the security minister, insists that 'everybody will be monitoring them...We will always be watching out against the latent danger of communism.'

The Economist, vol 336, no 7927

In-bred

ISOLATION AND SANCTIONS have left South Africa's business élite even more in-bred than royalty. Through a tangle of pyramids and cross-holdings, five conglomerates together control no less than 78.5 per cent of the Johannesburg stockmarket. More than half is controlled by just three families: the Ruperts (the Rembrandt Group), the Gordons (Liberty Life) and the Oppenheimers (Anglo American, De Beers, Minorco).

The Economist, vol 336, no 7927

Recovery

AMERICA'S PEREGRINE FALCON is about to be struck off the endangered species list, a move that will mark the dramatic recovery of the species that was almost wiped out by the pesticide DDT. Today there are 1,300 nesting pairs across the country. The Fish and Wildlife Service says this is the first example of a species recovering after almost becoming extinct. Announcing the move, Secretary of the Interior Bruce Babbit criticized efforts in Congress to weaken the Endangered Species Act, a law which he says, is primarily responsible for the falcon's recovery.

New Scientist, no 1987

J TOPHAM / CAMERAPRESS

Mutilation

POPULATION MINISTER Maher Mahran vowed at the Cairo International Conference on Population and Development that 'Egypt is going to work on the elimination of female genital mutilation'. Draft legislation was prepared, but the Grand Sheikh of Cairo issued a *fatwa*, or edict, stating that mutilation is a duty for all Muslim women, and if women refuse it they should be challenged 'as if they had renounced the call to prayers'. As a result, plans to submit a draft Bill to the Egyptian parliament have been 'put on hold for two or three years', according to Health Minister Ali Abdel-Fattah.

People and the Planet, vol 4 no 3

CUBA

Vital step

Havana gay scene comes to life

GAY LIFE IN CUBA is changing. Until recently the security forces were known to jail people for 'looking homosexual'. Police swoops and beatings at gay haunts were not uncommon. Though gay intercourse is not illegal, Castro's 1959 revolution failed to quash homophobia and machismo. Persecution occurred because of the clandestine – and therefore potentially counter-revolutionary – nature of gay gatherings.

But the film *Strawberry and Chocolate*, directed by Tomas Gutierrez Alea, appears to have broken the ice. Nominated at the 1995 Academy Awards in the US for Best Foreign Film, the story of growing trust between a gay artist and a state informer is now showing all over the country.

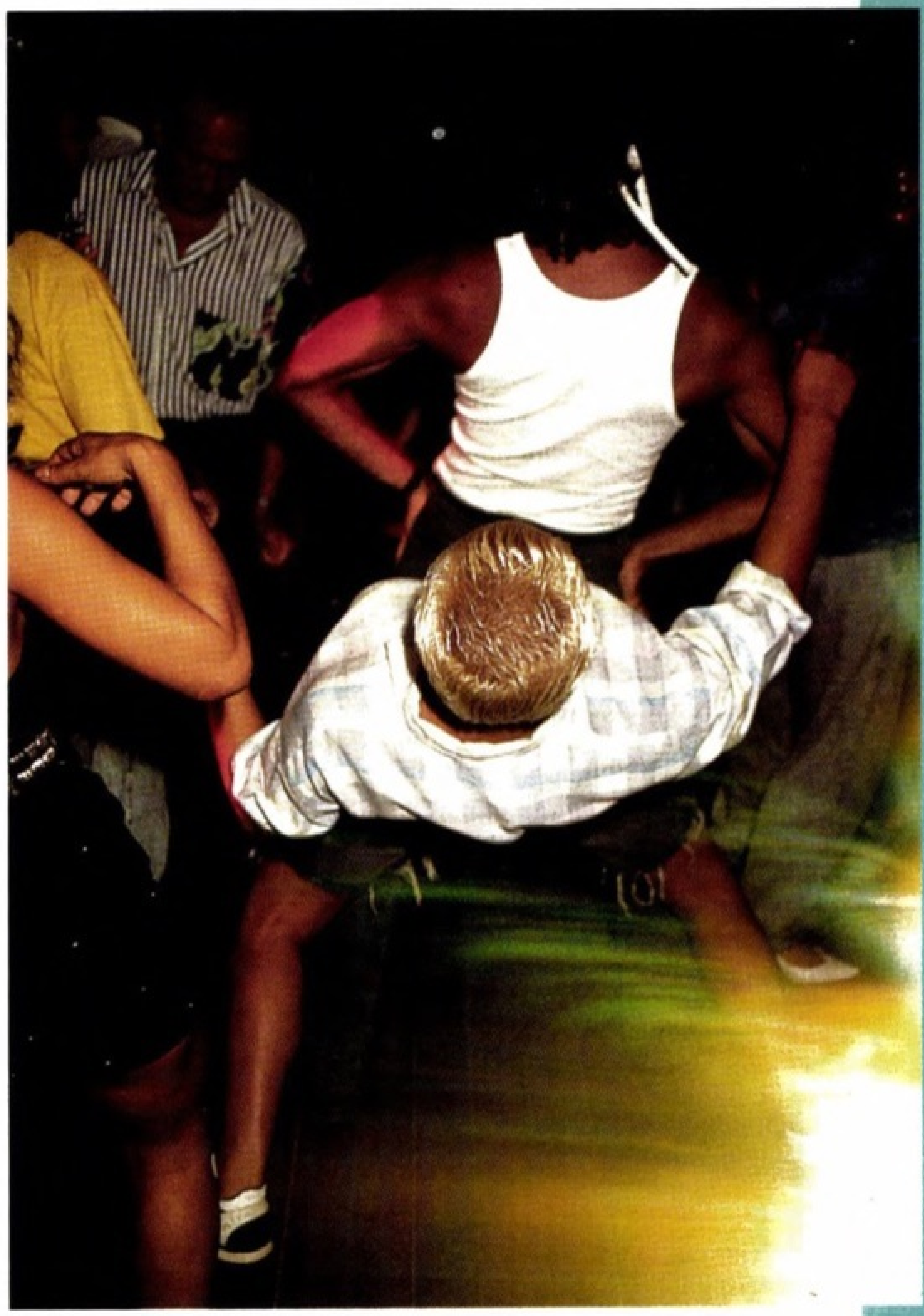
'I think all gay people could agree it was a vital step forward for us,' says 28-year-old Willy Licourt Garcia. 'People used to think of gays as evil. Now they see in the film that we know how to love – indeed, that perhaps we understand love better than most, after what we've been through over the years.'

The gay scene in Havana is alive with parties. It's common for people to rent out their house to a group of gay people for the night for a 'Ten Peso' party – ten pesos being the agreed rent.

Cuba had its first gay festival this February and there was an historic confrontation with the police. 'They tried to use force to disperse us,' remembers participant Arnaldo Sanchez, 'but we held our ground and eventually they went away because they could see we weren't causing any trouble.'

Cynics might suggest that the new tolerance by the regime is simply a ploy to encourage more foreigners to spend more dollars. The US Congress is tightening the noose of an economic embargo around Cuba's neck. Yet Cubans are as advanced as any capitalist society in their development of medicine, including drugs to treat AIDS. There is now an austerely named Department for Sexual Orientation in Havana, where an advice centre dispenses free condoms and runs safe-sex classes in schools. The second international AIDS conference was hosted in Cuba in May.

De rigueur for Havana chic is the annual drag-show at the AIDS sanatorium in Los Cocos, about nine miles south of the capital. Pretty, whitewashed, red-roofed bungalows scattered among the trees house around 200 people with AIDS. As in all Cuban hospitals, the emphasis is on community involvement. Couples or families are encouraged to live together as freely as they like, with a community theatre, swimming pool and cinema 'on campus'. Most people go home for the weekend.



MICHAEL J O'BRIEN / PANOS PICTURES

Gay life in Cuba: stepping out.

'There is no homosexuality in Cuba,' insisted a doctor drily to a group of visitors to a medical school. It's the old, official line. A gay poet I met, who's having his first volume of poems published by the State this year, still has to pretend that his love poems are written to women.

The first, tentative steps are being made to form a gay organization in Cuba. A lesbian told me the group will soon approach the authorities for official recognition. But she was still too frightened to tell me her name. ■

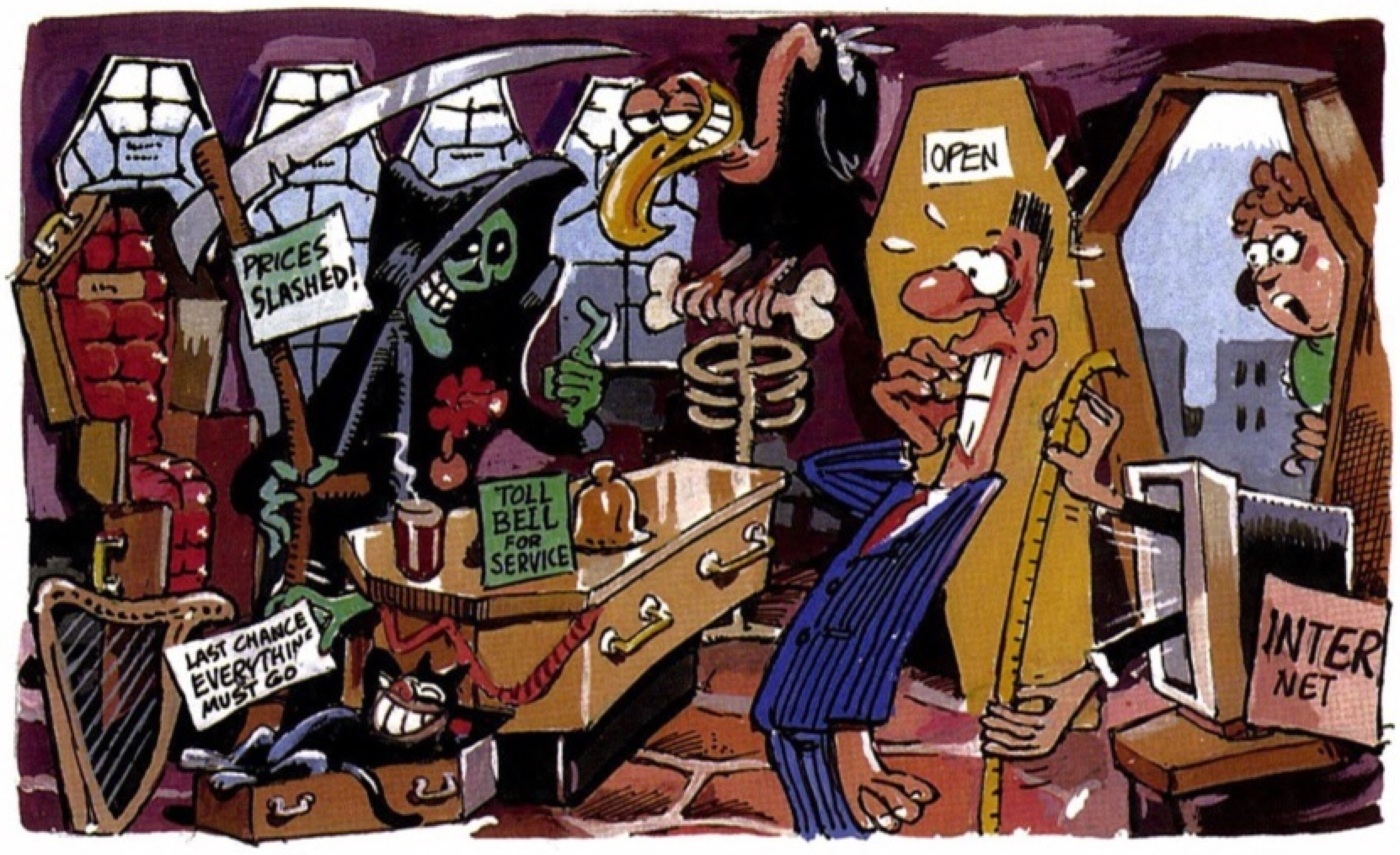
Catherine Adams

Update

LIFESTYLES

Deathnet

Cyberspace accommodates the Grim Reaper


PRICES SLASHED!
OPEN
TOLL BELL FOR SERVICE
LAST CHANCE EVERYTHIN' MUST GO
INTER NET

JIM NEEDLE

INTERNET SURFERS now have a 'Garden of Remembrance' of their own. Immortalized in cyberspace, their obituary can be kept online for as long as they want and available to be read by anyone in the world with access to a computer and modem. The commemoration can be in a multimedia form, including excerpts from home videos, letters, diaries or their favourite music.

The Internet Garden of Remembrance *(http.//www.islandnet.com/-deathnet/garden.html)* is the main winner of the Natural Death Centre Awards for 1995. The London-based Centre runs, among other things, a 'Natural Death Salon' where participants can discuss ideas for imaginative funerals, unusual preparations for senility, Living Wills and the like.

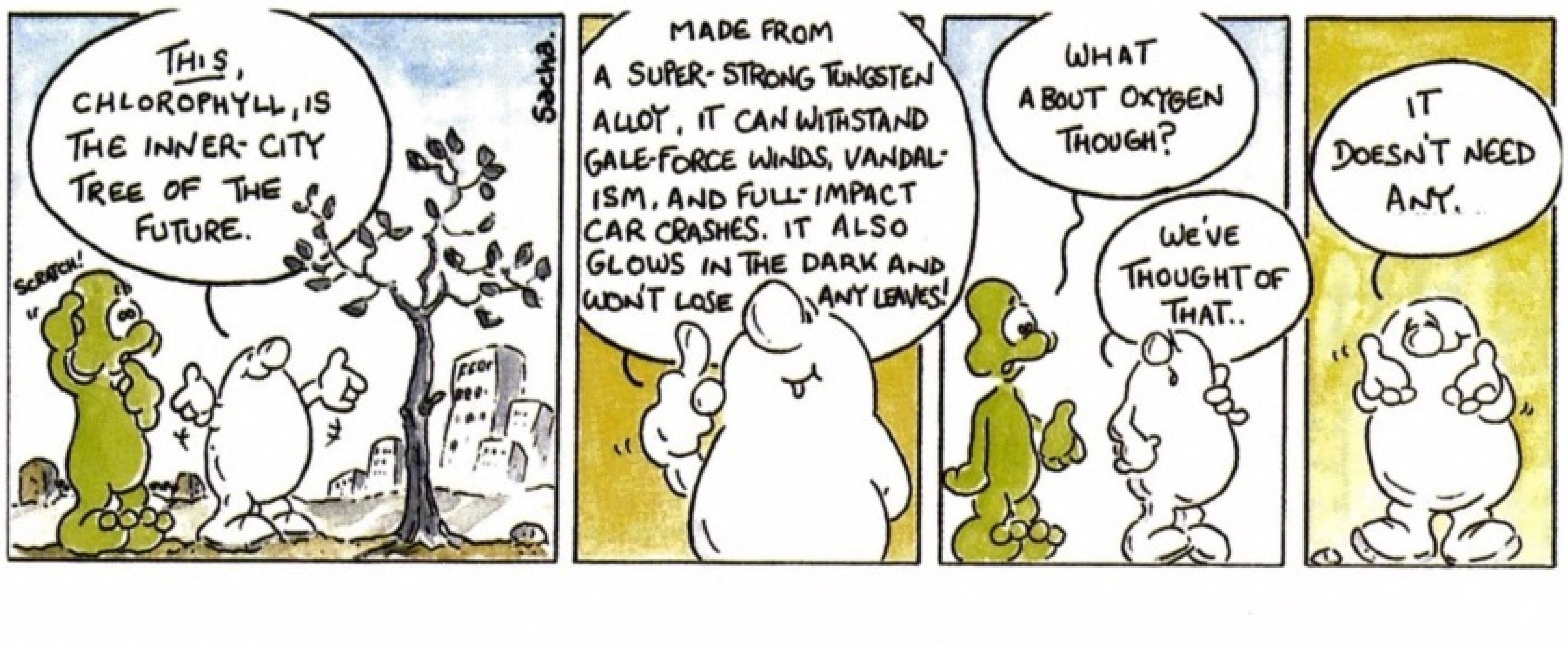
Other Award winners include The Box, a collapsible coffin from Zimbabwe. The coffin does not have wooden sides or a wooden top, just a wooden base which folds down into thirds, and a shroud which is attached to the base. All this fits into a bag which can be slung over the shoulder and carried home on a bus. Unlike wooden coffins, The Box is allowed onto buses in Zimbabwe, thus reducing the transport costs of funerals. The same may apply in Britain, where British Rail also bans wooden coffins.

Heaven on Earth in Bristol, England, is another Award winner and sells the 'Embodiment Chest'. This made-to-measure coffin serves as a bookcase, coffee table or wine rack until the call comes for the final storage of its owner. The shop helps customers to arrange 'green' funerals, selling everything from cardboard coffins to painted caskets in the shape of motor cars. Heaven on Earth plans to expand into every British city until it rivals what it claims are much less creative death-supermarket chains in France. ■

David Ransom

The Natural Death Centre, 20 Heber Road, London NW2 6AA, England.

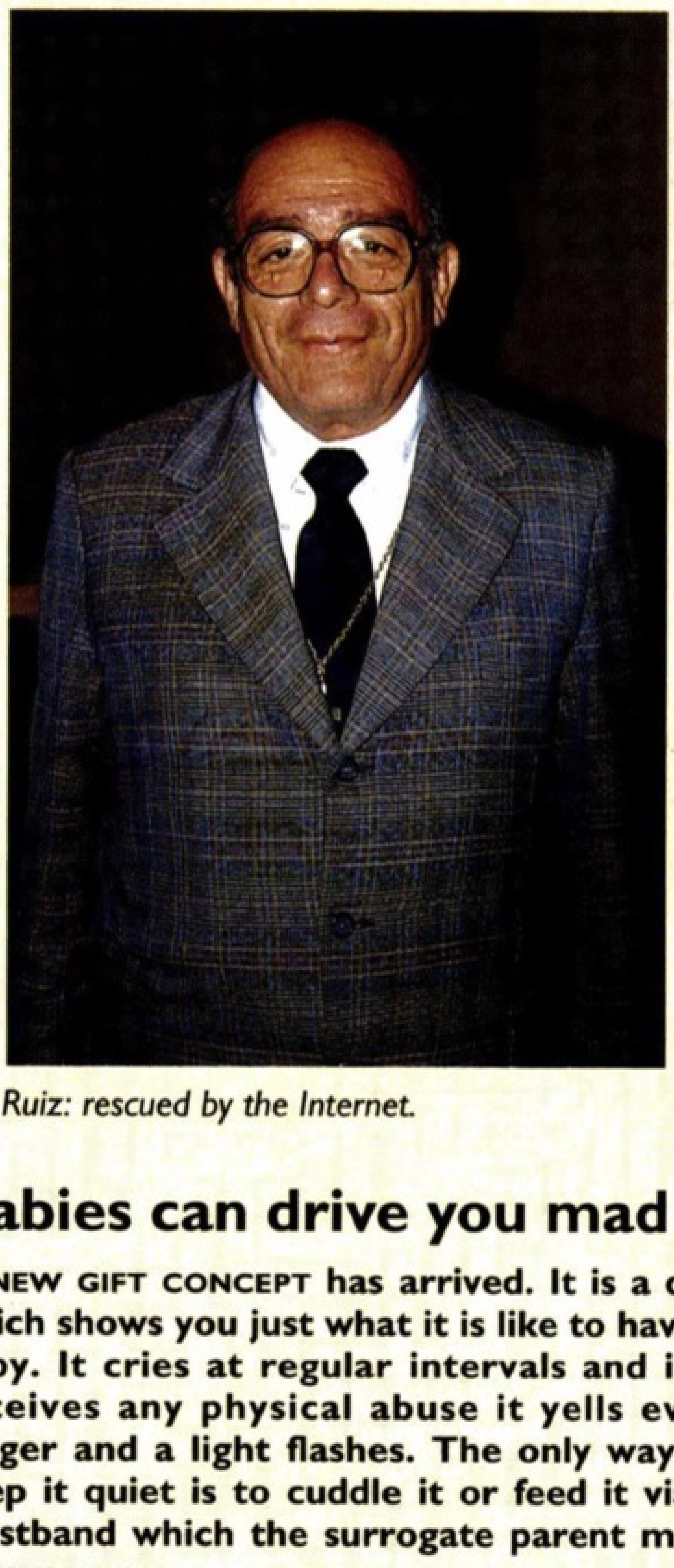
Chlorophyll by Sacha


THIS, CHLOROPHYLL, IS THE INNER-CITY TREE OF THE FUTURE.
SCRATCH!
Sacha.
MADE FROM A SUPER-STRONG TUNGSTEN ALLOY, IT CAN WITHSTAND GALE-FORCE WINDS, VANDALISM, AND FULL-IMPACT CAR CRASHES. IT ALSO GLOWS IN THE DARK AND WON'T LOSE ANY LEAVES!
WHAT ABOUT OXYGEN THOUGH?
WE'VE THOUGHT OF THAT..
IT DOESN'T NEED ANY..

SOS

WHEN A MOB OF 200 conservative opponents of Bishop Samuel Ruiz attacked the cathedral in San Cristóbal de las Casas, Chiapas, an urgent plea by Father Pablo Romo went out on the Internet. 'People in the US who got the message called Mexican consulates,' recalls Romo. 'The consulates called Mexico City; Mexico City called the State Government in Chiapas. Within two hours the police, who had been standing around, were ordered to stop the riot.'

Mother Jones, July 1995



DAVID RANSOM

Ruiz: rescued by the Internet.

Babies can drive you mad

A NEW GIFT CONCEPT has arrived. It is a doll which shows you just what it is like to have a baby. It cries at regular intervals and if it receives any physical abuse it yells even longer and a light flashes. The only way to keep it quiet is to cuddle it or feed it via a wristband which the surrogate parent must always wear.

It is designed to demonstrate that babies can drive you mad. The Family Planning Association have got one and schools have shown an interest. More expensive than a condom, but for about £155($250) 'Baby Think it Over' is a lot cheaper than real life.

Everywoman, September 1995

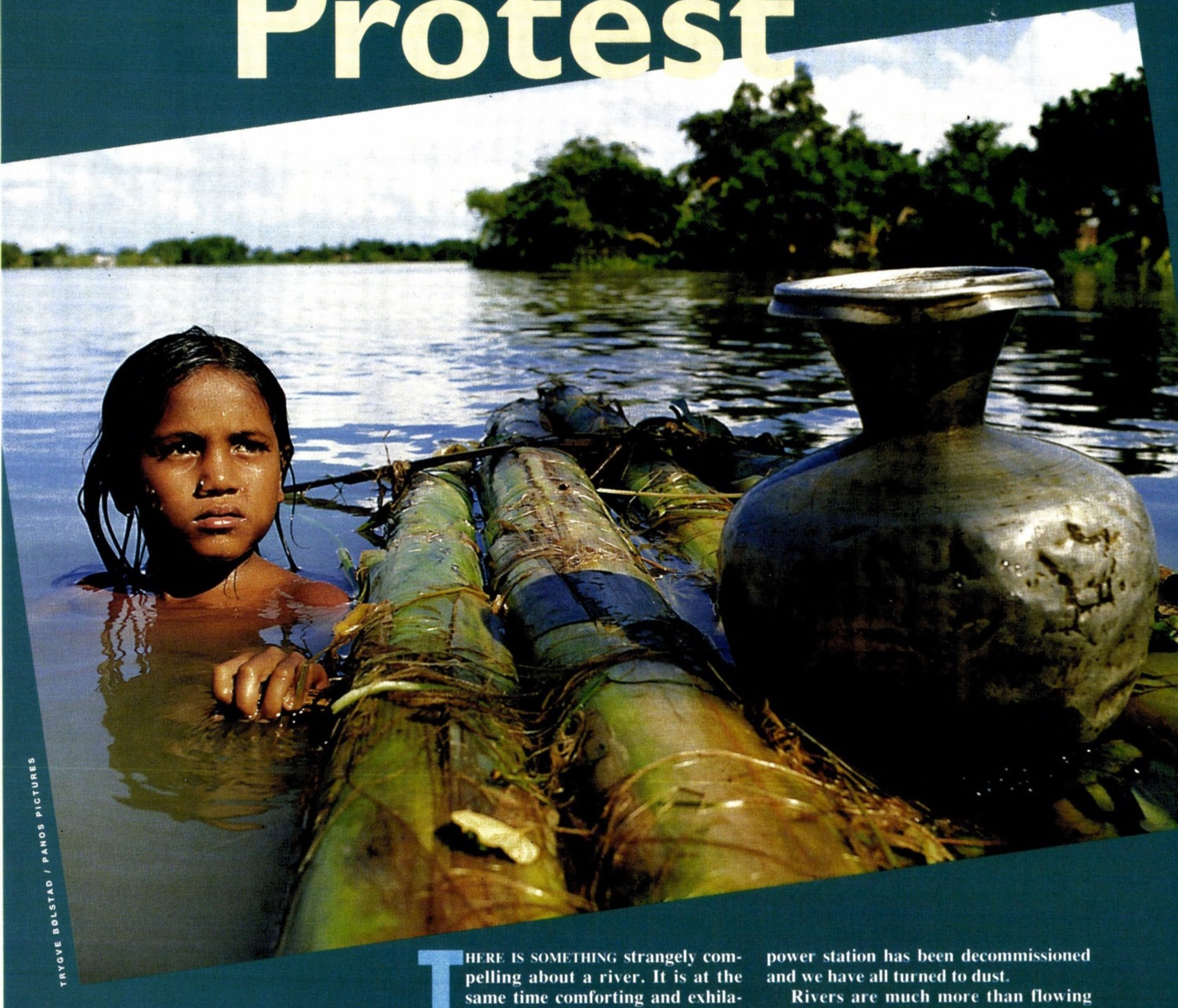
"Quote"

'I did not over- or under-estimate the response [to France's nuclear tests in the Pacific] because I knew I was dealing with a question of national security. You don't consult the polls or consider the foreign response in that case.'

President Jacques Chirac of France

Flood of Protest

Richard Swift uncovers the real reasons why people – and beavers – want to mess with rivers. He charts the growing movement in defense of our great waterways.



TRYGVE BØLSTAD / PANOS PICTURES

THERE IS SOMETHING strangely compelling about a river. It is at the same time comforting and exhilarating. Part of it is the hypnosis of constant movement – like the flames of a fire or waves on a beach. But part of it is that sense that there is something eternal here that will keep on going long after the car engine conks out, the nuclear power station has been decommissioned and we have all turned to dust.

Rivers are much more than flowing water. As Max Finkelstein of Canada's Heritage Rivers Program points out: 'They are the threads that bind the fabric of nature and humanity and define the world's mosaic of cultures and landscapes. Throughout the world, rivers are imprinted on the land, and in the hearts and minds of the people who live along their banks.'

Different rivers 'imprint' in different ways. A lazy stretch of the Mekong or the Amazon is a world away from the violent rapids of the Colorado or the treacherous eddies of the Yangtze. And rivers can be whimsical in their changes of mood; the Mississippi on a lazy late summer's afternoon flowing by New Orleans's Jackson Square is a very different beast from the Mississippi in full flood sweeping away fields, farms and towns in the American Midwest as it did back in the spring of 1993. It is little wonder that when humanity set out to 'conquer nature' the wayward and uncontrolled river was a prime candidate.

Giant mega-dams are the largest-ever structures built by humans

The imprint of the river will be different if you spend your time catching the giant Mekong catfish for your food or are the deckhand on a colourful Zaire river barge, or rely on the Amazon to carry you to the nearest market, or are related to a river only as a distant source of water and power. For those of us who live with a river every day, its moods shape our moods. For those who visit to holiday or for religious purposes (as do hundreds of thousands in India) it is vital to the renewal of spirit and body. Then there are people whose livelihoods and prosperity are dependent on conquering the river and bending it to human purpose. It is increasingly difficult for rivers to meet all such competing needs.

Ol' Man River comes a callin' – Jack Childress of LaGrange Missouri takes stock after the great Mississippi flood of 1993.

PAUL FUSCO / MAGNUM

There are in fact two cultural strains to indicate how human beings think about rivers. In the oldest the river is taken as circular and self-regulating with flooding cycles and water web accorded an almost spiritual status. This reverence for and modesty about the natural wonder of rivers comes from people whose food and drink are drawn directly from its waters. Indigenous peoples the world over have passed this sensibility down to farmers and fishers and now ecologists have taken up the torch.

A more recent notion of the river is that of a straight line running from point A to point B. This dates from the Roman water-supply aqueducts – the first rivers without curves. It is a notion that concentrates on military and commercial uses and is tied to the fate of states and empires. Here the river is a highway to be shaped for transportation – or latterly something to dam and divert – displacing its natural cycles with ones more convenient to the master designer.

Only one other species treats flowing water in this fashion. It said that North American beavers can't stand the sound of running water. Under laboratory conditions they will almost immediately seek to dam it up. There are lots of Canadian clichés about beavers being 'nature's little engineers'. They are the only other mammal to alter their habitat but unlike human engineers the wetlands they create are of some use to other species. Fish, waterfowl and a profusion of plantlife flourish there. Beavers are like their human engineering counterparts in another way as well – they have a lot of nerve. This point was brought home forcefully to me this summer when a beaver swam right up behind me (stick in mouth) as I tried to free a culvert from its dam of mud and sticks that was overflowing our country road. It was as if the little beast was saying 'you can do what you want but I'm going to dam it right back up as soon as you leave'. And sure enough that's just what happened.

I am generally quite willing to leave nature to its own devices but I find beavers a pain in the butt. I am sure that this is how most other species think about the humans who alternately drown or dry up their natural habitats by damming, diverting and channelling river flows. Increasingly that's also how a great deal of humanity is coming to feel about hydraulic engineers and their political masters – the people who shape the rivers and thus the lives and livelihoods of those who live with them.

Cementing the river

Around the world this process is well advanced. A massive hydrological infrastructure comprised of huge dams, hydrogenerating stations, major water diversion canals, thousands of kilometres of dikes and levees and vast irrigation systems has fundamentally altered most of the world's populated river eco-systems. There are now 36,000 large-scale dams and they are still going up at the rate of 170 a year, displacing a million-odd 'reservoir refugees' – mostly in the South where they lack the political clout to resist.

Vast bodies of water like Russia's Aral Sea and Africa's Lake Chad are being systematically dried up. Whole riverine fisheries have been wiped out. Upstream wildlife habitat and some of the most fertile valley-bottom land has drowned. Downstream agriculture is robbed of vital nutrients that used to come from the silt which now clogs up dam reservoirs. There it slowly eats away at electrical potential and reduces storage capacity. Farmers are forced to rely instead on expensive fertilizers and are plagued with problems of waterlogged soil and of course salt – the curse of all civilizations based on large-scale irrigation. In some parts of Sind province in Pakistan more than half of once-productive land irrigated from the heavily-dammed Indus river is now barren and covered with salt. River eco-systems are not only over-engineered but are poisoned by industrial chemicals and agricultural run-off. In the worst cases, such as Poland, three-quarters of river water is unfit even for industrial use.

Giant mega-dams are the largest-ever structures built by humans and as such provide ample opportunities for cost overruns and corruption. A great deal of the Third World's crippling debt load comes from trying to pay off such bills. But financial costs are born by individual taxpayers and entire economies (usually meaning the 'structurally adjusted' poor) while profits tend to accrue to those better-placed to influence decisions. Such projects are not altruistic acts taken in the public interest. Benefits are unevenly distributed. The big growers of California are a classic example. Some of the most extensive riverworks in the world

CRISPIN HUGHES / PANOS PICTURES

The fisherfolk of Southern Sudan still use their traditional baskets: but over-engineering of river eco-systems endangers many of the world's riverine fisheries.

have ended up providing a subsidy that runs as high as two million dollars for a large farm to produce crops that the US already has in surplus. Similarly with the Bangladesh Flood Action Plan where supposed flood protection was transformed into a tool for agricultural 'modernization' which benefited larger commercial farmers. So even fiscal conservatives (at least those who don't stand to gain) these days are becoming quite wary of major river projects.

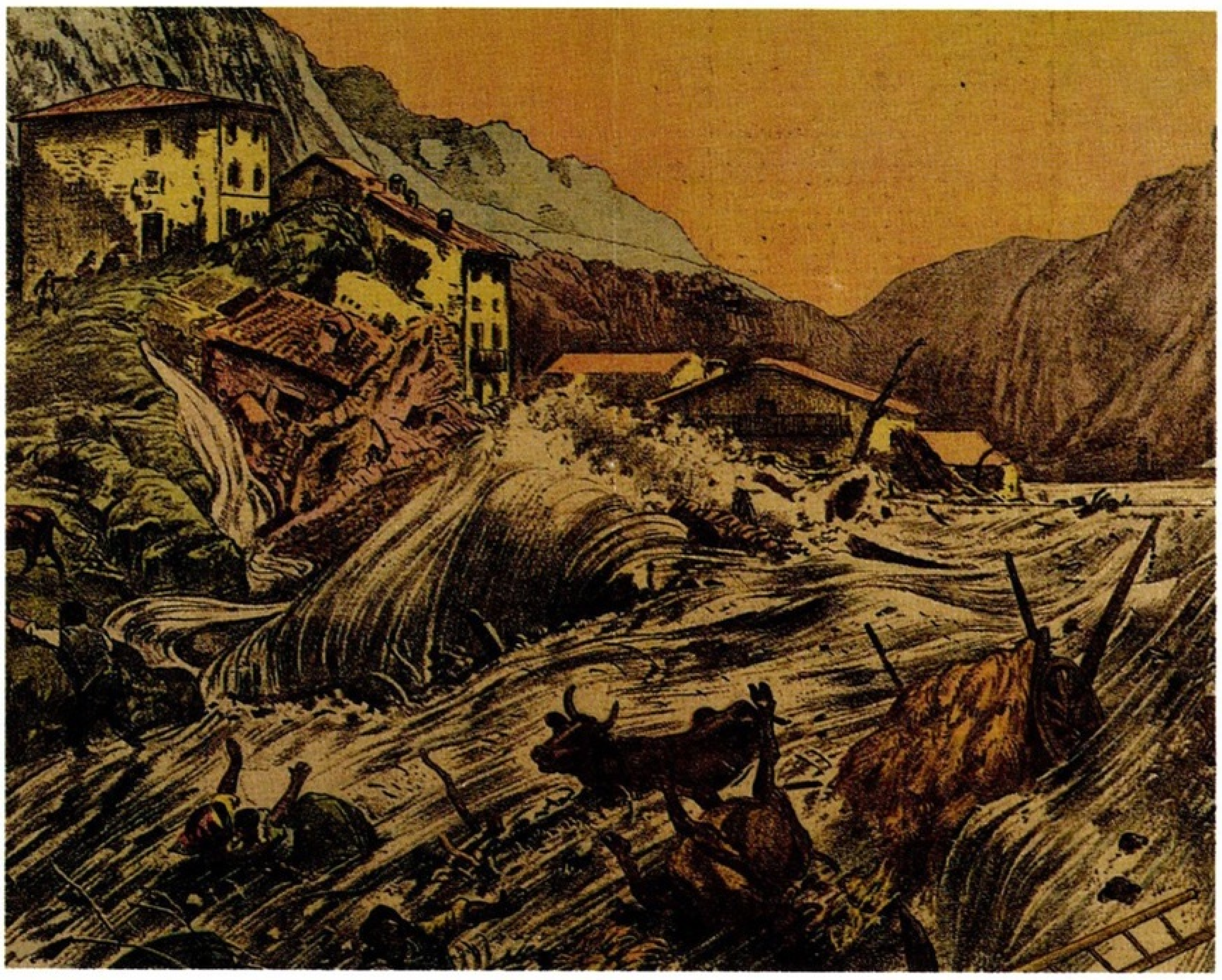
Large-scale river engineering means the centralization and arrogant use of political power that inevitably goes hand-in-hand with any mega-project. From the beginning of recorded history in the valleys of the Tigres-Euphrates or the Yellow River in Ancient China major riverworks were used by autocratic states to control the labour and crops of previously autonomous villages. To this day decisions as to how and where to build big dams or divert river flows are often hidden from public scrutiny. Remote bureaucratic organizations staffed by ambitious technocrats such as the US Bureau of Reclamation, the Army Corps of Engineers, the Mekong Secretariat in South East Asia or the Lake Chad Basin Commission in West Africa shape projects and then look for political sponsors to push them through. Those most affected are often the last to know.

There is of course a credit side to the ledger. Defenders of river engineering point to tens of thousands of kilowatts of electricity generated and thousands of acres of arid land brought into agricultural production. Some of its achievements have verged on the fantastic: concrete rivers criss-crossing deserts from Libya to Arizona to carry water to thirsty crops and consumers, staircases of dams that climb US rivers like the Colorado and the Columbia (and are planned for the Mekong) and the growth of heavily water-dependent crops like cotton in the desert conditions of Egypt and Central Asia. Billions of dollars have been spent and hundreds of thousands of people are now employed either building or maintaining riverworks from the steamy heat of the Volta in Ghana to the frozen tundra of Siberia. Indeed mega-dams and large-scale irrigation are now so important a part of modern industrial infrastructure and the power grid underpinning it that to question them seems an absurdity.

Defending the river

Yet that is precisely what is being done. In an address printed in the May 1993 issue of the slick trade monthly *Water Power and Dam Construction* W Pircher, a big cheese at the International Commission of Large Dams, expresses alarm at the growing movement against river engineering. 'Today the resistance to new dams... is more fundamental, better organized, more spectacular... it is a serious counter-movement that has already succeeded in reducing the prestige of dam engineering in the public eye, and it is starting to make work difficult for our profession.' This is not idle propaganda. The defense of river eco-systems has been most pronounced in North America and in Asia where river engineering has remade the geography of countries like the US and India. But it is now finding echoes from the Rhine to the Amazon. The movement typically combines concern for poor people's livelihood and land rights usurped in the name of hydrological progress with issues of long-term environmental impact – the destruction of wetlands, natural habitats and watersheds.

Oddly it was the Left of the political spectrum, back in the salad days of post-war prosperity when growth and progress seemed the same thing, who championed major water works. Everyone from US New Dealers to Soviet Communists encouraged job-creating public works that would modernize for the benefit of all. The autocratic structures and dis-economies of scale such projects demanded are now being rethought by new generations of radicals with a greener, more decentralist outlook. This is the core of the counter movement that so worries the International Commission of Large Dams and its fellow-travellers. And well they should worry. The dam-building era in the industrial North has largely ground to a halt because of the potent alliance of anti-dam activists. In the South the World Bank has


MARY EVANS PICTURE LIBRARY

Disaster at Dezzo, Italy (1923). Living too close to a dam can give a false sense of security.

been pressured to withdraw from several large but dubious projects on the Indian sub-continent. Both Thailand and Bangladesh have witnessed victories over major river engineering schemes.

A big issue for all these campaigns is waste. Not only are we destroying the beauty and integrity of our great rivers but we are turning renewable resources into non-renewable ones. It is a characteristic of any predatory economy to 'mine' such resources, thus destroying their potential for infinite renewal. The scarcity of good fresh water, mostly drawn from rivers, is a classic example. Modern hydraulic systems lose masses of this water to evaporation from reservoirs and cement diversion canals. Less than 40 per cent of the water that finally gets taken for irrigation actually reaches the roots of plants. Industrial and municipal water is wasted at similarly startling rates. Expensive hydro-generated electricity (rivalling nuclear power in costs) is often in oversupply and is underpriced especially to industrial users. There is so much waste here that there is a consensus amongst energy economists that the best new source of power is conservation. All the best hydro-dam sites have now been used up so new hydro-electricity is likely to become even more costly.

Water scarcity is also beginning to provoke tensions between riverine nation-states over who gets to use what amount of river water. This is being played out from the River Jordan (Israel vs Jordan and Syria) to the River Ganges (India vs Bangladesh). But it is the Turkish plans for mega-engineering on the upper (Kurdish) reaches of the Euphrates that may be the most explosive. Downstream, arid Syria and Iraq have been dependent on its flow for irrigation and drinking water since biblical days. It may be that water rather than oil will be responsible the next time the troops mass at a mid-east border.

Conserving the river

The case for a new approach that respects river ecology will only be convincing if it is accompanied by a vision that allows for a transition to sustainable human use. Major existing river dams are unlikely to be abandoned even then – although their capacity will gradually be reduced with the inevitable build-up of silt in their reservoirs. Appropriate and intermediate technologies are at hand both to generate electricity and use river water in a more ecologically sound fashion. Run-of-the-river dams that do not impede flow have worked for a longtime in Western China and could have an even brighter future if new progress is made in technologies to store electrical power in cells (rather than storing water in reservoirs). There are also the usual cheaper power alternatives of sun, steam and wind that are badly underutilized. Radical conservation could also reduce demand for water to sustainable levels. The highly water-conscious (some would say water-grabbing) Israelis lead the way here with drip irrigation systems that use a fraction of what waterlogs the soil elsewhere. Most farmers, particularly those in the South, practice irrigation in the informal sector using a variety of micro-dams, rainwater harvesting and low-cost pumps. Despite the millions poured into industrialized diversion of riverwater for irrigation this informal sector remains much more resource-efficient. With proper public sector support and advice these methods could be fine-tuned and extended, reducing the mounting pressure on river flows.

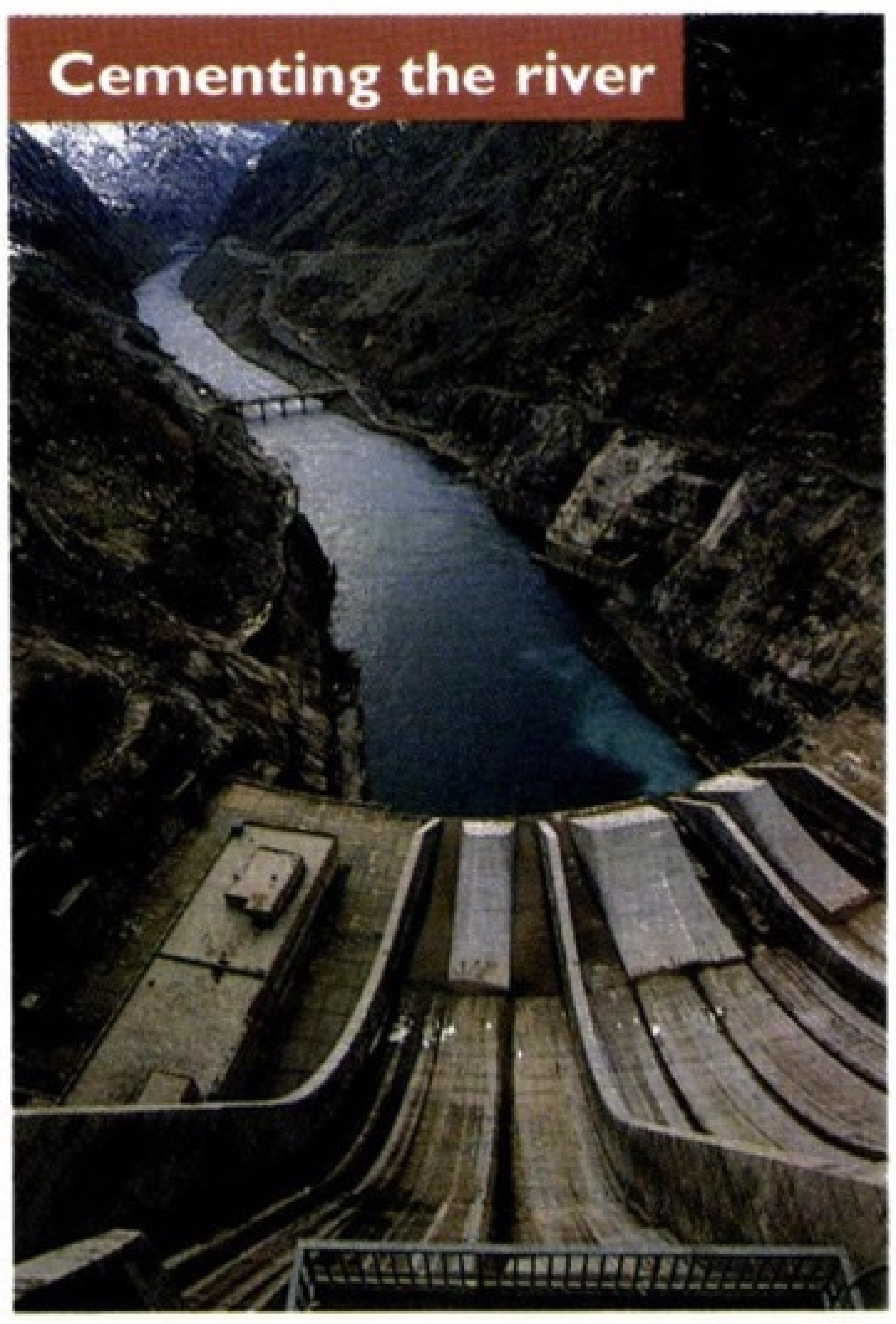
The fate of our rivers rests on our ability to turn around a predatory economy

But there can be no question of going back to some pre-industrial utopia of pristine riverbanks and absolutely pure water. While it is crucial to keep some wilderness stretches of riverbank flourishing, far too many people live beside rivers and depend on them for their livelihoods. And the human spirit also needs those precious flows – who can imagine Florence without the Arno, Paris without the Seine or Khartoum without the Nile? The way some cities have dealt with their rivers gives hope that the rivers and large numbers of people can prosper together. A well-used and relatively clean river can centre a city and bring life with walkways, handsome bridges, accessible quays and green spaces. Intelligent use of rivers by avoiding over-engineering or burying their waters under cement can allow a city to breathe – the way that Rome does but Los Angeles doesn't. In a traffic-clogged metropolis like Bangkok travelling by passenger-launch on the Chao Phraya is both more efficient and far more pleasant than sitting for hours bumper-to-bumper. Painters from Caneletto to Pizzaro to Turner have brought city rivers and their bridges to life in their work. There seems to be no equivalent school of hydro-dam painters.

Despite its impressive growth the odds remain long that the movement in defense of rivers will be able to reverse the substantial momentum of hydrological society. Fundamental interests are at stake and it will take a great deal to shake them. Ultimately the fate of our rivers rests on our ability to turn around a predatory economy and the wasteful patterns of consumption that it sustains. A civilization that prizes thirsty golf-courses and cotton crops in the desert over wetlands and clean drinking water simply cannot last. There is, after all, little left of the great riverworks of earlier hydraulic societies. Will aliens visiting our planet a thousand years from now find our only monuments to be silted-over dams that relentless rivers have turned into magnificent waterfalls? T S Eliot had it that: 'I do not know much about gods; but I think that the river is a strong brown god – sullen, untamed and intractable.' As the farmers who settled too close to the Mississippi learned at their cost – the river always wins. ■

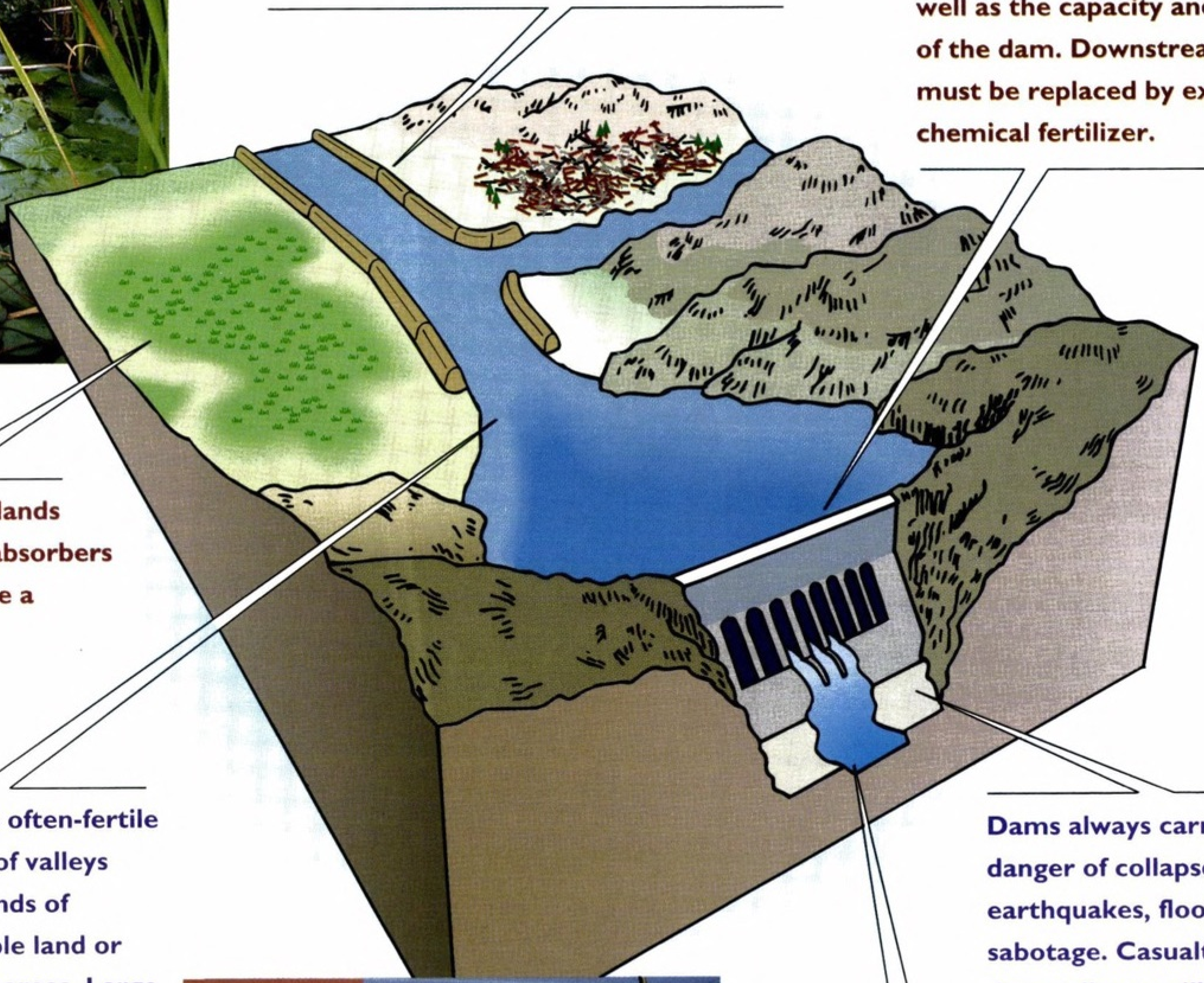
Current follies

While delivering electricity – and to some degree controlling flooding – the 'conquest of nature' approach to river-engineering creates as many problems as it solves.



PANOS PICTURES / JON LEVY

JEANETTE L ANDREWS-BERTHEAU



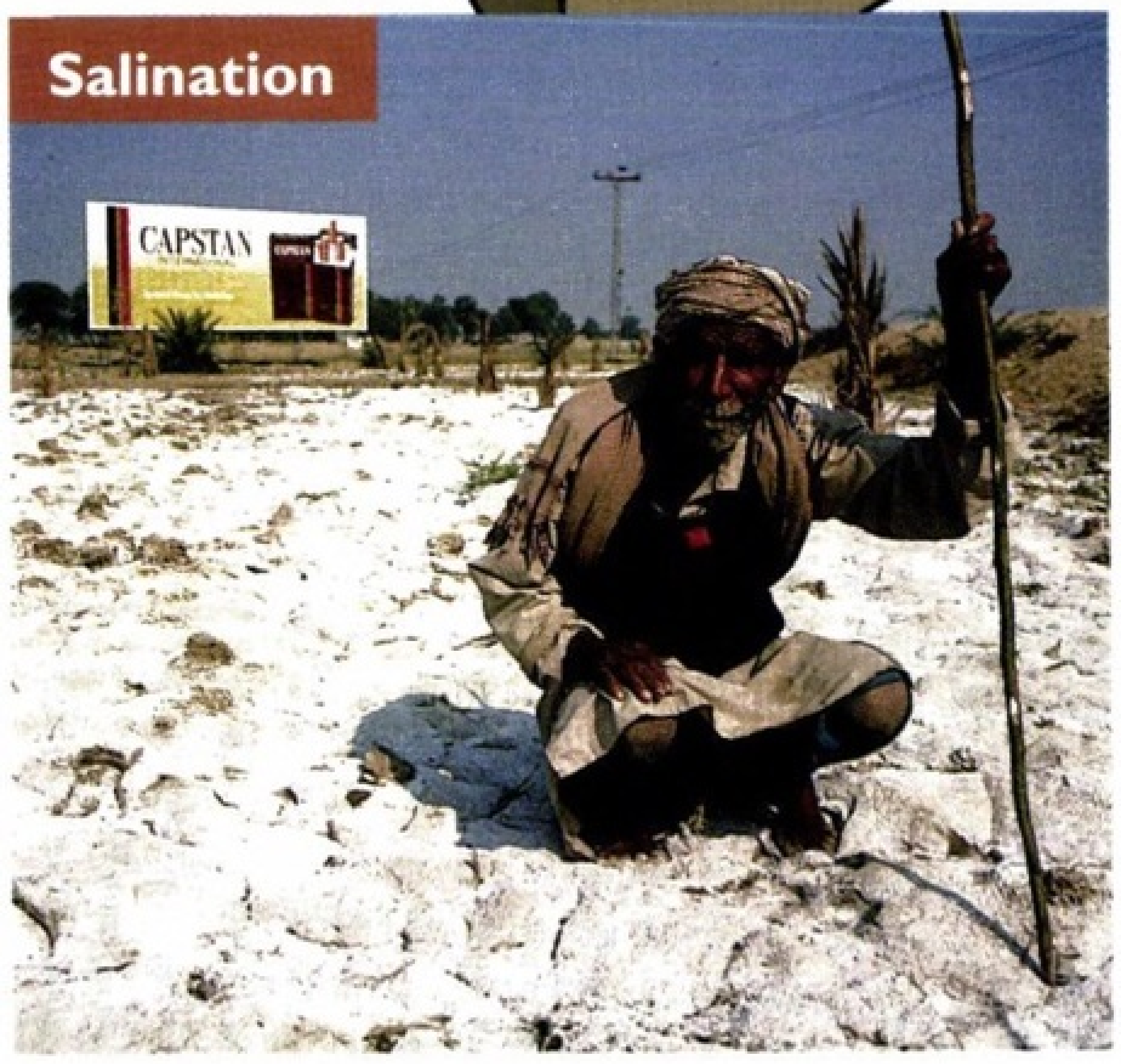
Straightening out and diking rivers increases the speed and volume of the river's flow creating serious flooding in very wet years when dikes might not hold. Deforestation increases damaging erosion and destroys a river's watershed.

Silt is trapped behind dams, reducing fertility downstream as well as the capacity and life-span of the dam. Downstream silt must be replaced by expensive chemical fertilizer.

Diking cuts off wetlands which are natural absorbers of flood and provide a wildlife habitat.

Reservoirs flood the often-fertile land at the bottom of valleys and displace thousands of people to less suitable land or overcrowded urban areas. Large reservoirs, particularly in hot climates, have enormous losses of precious water through evaporation. Irrigation channels spread disease, particularly malaria (300 million sufferers) and bilharzia (200 million affected).

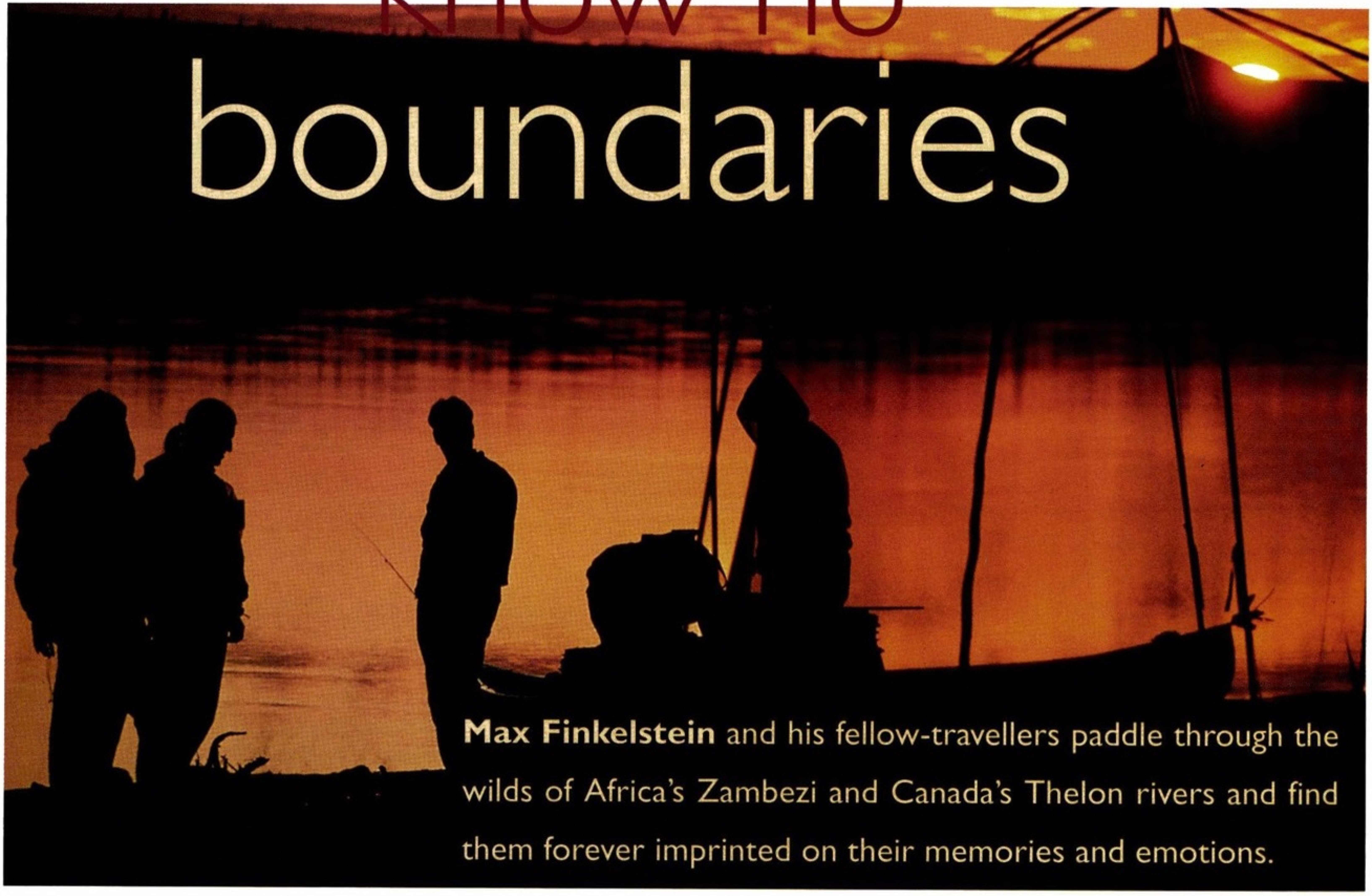
Dams always carry the danger of collapse due to earthquakes, flooding or sabotage. Casualties from dam collapse will be much higher than those from normal flooding.



PANOS PICTURES / JIMMY HOLMES

Riverine fisheries are destroyed as nutrients (fish food) become trapped behind dams and fish are unable to move up rivers to spawn. Downstream agriculture, with reduced water and silt flow, is subject to much higher dangers of salination (salt-poisoning).

Rivers know no boundaries



Max Finkelstein and his fellow-travellers paddle through the wilds of Africa's Zambezi and Canada's Thelon rivers and find them forever imprinted on their memories and emotions.

ALL PHOTOS BY MAX FINKELSTEIN

I DIG IN HARD with my paddle, but the canoe barely moves forward into the wind and waves. Spray blows off the white caps, stinging my eyes. The wind is increasing. A big tundra lake is no place to be in a storm. I shout encouragement to Carolyn in the bow, who is gamely paddling although her right leg is propped up in front of her, her ankle swollen as big as a grapefruit from a mishap a few days earlier: 'We just have to get around this point and then we'll be sheltered from the wind!' The three other canoes in our convoy bob brightly, tiny red and blue specks among the black and white water.

As we turn and run with the waves around the tip of a long spit jutting out into Beverley Lake, we see two canvas wall tents, one white and one brown, on the gravel beach. People wave to us from the shore and soon we are warm and dry, sitting cross-legged in front of a Coleman stove, eating bannock and fresh caribou – it had been shot outside of the Game Sanctuary, we are assured – drinking copious amounts of tea and swapping stories with Alex, Keith, Brian and Cathy, four Inuit from Baker Lake who had come up the river to meet us.

Less than two months later, I am sitting cross-legged in front of another fire, halfway around the world on the banks of the Zambezi in Mana Pools National Park. I am eating *sadza* (mealie-meal – the staple grain of Zimbabwe) and *nyama* (meat – in this case impala, killed, I am assured, outside of the park) and drinking Fanta with two new friends, Action Matope and Naison Ncube, two Mashona who work for the park.

I think about the people who live, or lived, along these rivers, for whom they are more than home. The rivers are inexorably mixed with their traditions and mythology. The river waters mix, metaphorically at least, with the blood coursing through their veins. Perhaps there is a little bit of some river, somewhere, in all of us?

On both trips the Inuit and the Mashona opened their homes and hearts to us. These people share more than a tradition of hospitality. They are both known for their skilled soapstone carvings that transform inanimate rock into works of art. The carvings speak of the close spiritual relationship these peoples have with the rivers, the land, and its wildlife. Both peoples are also undergoing a social transformation, working towards a melding of their traditional ways with the new, forging a strong sense of community and taking back control of their own destiny.

Alex, Brian, Cathy and Keith had never been as far up the river as Beverley Lake before. Yet this was the home of their

The Thelon in a placid mood; one of the world's last great wilderness rivers.

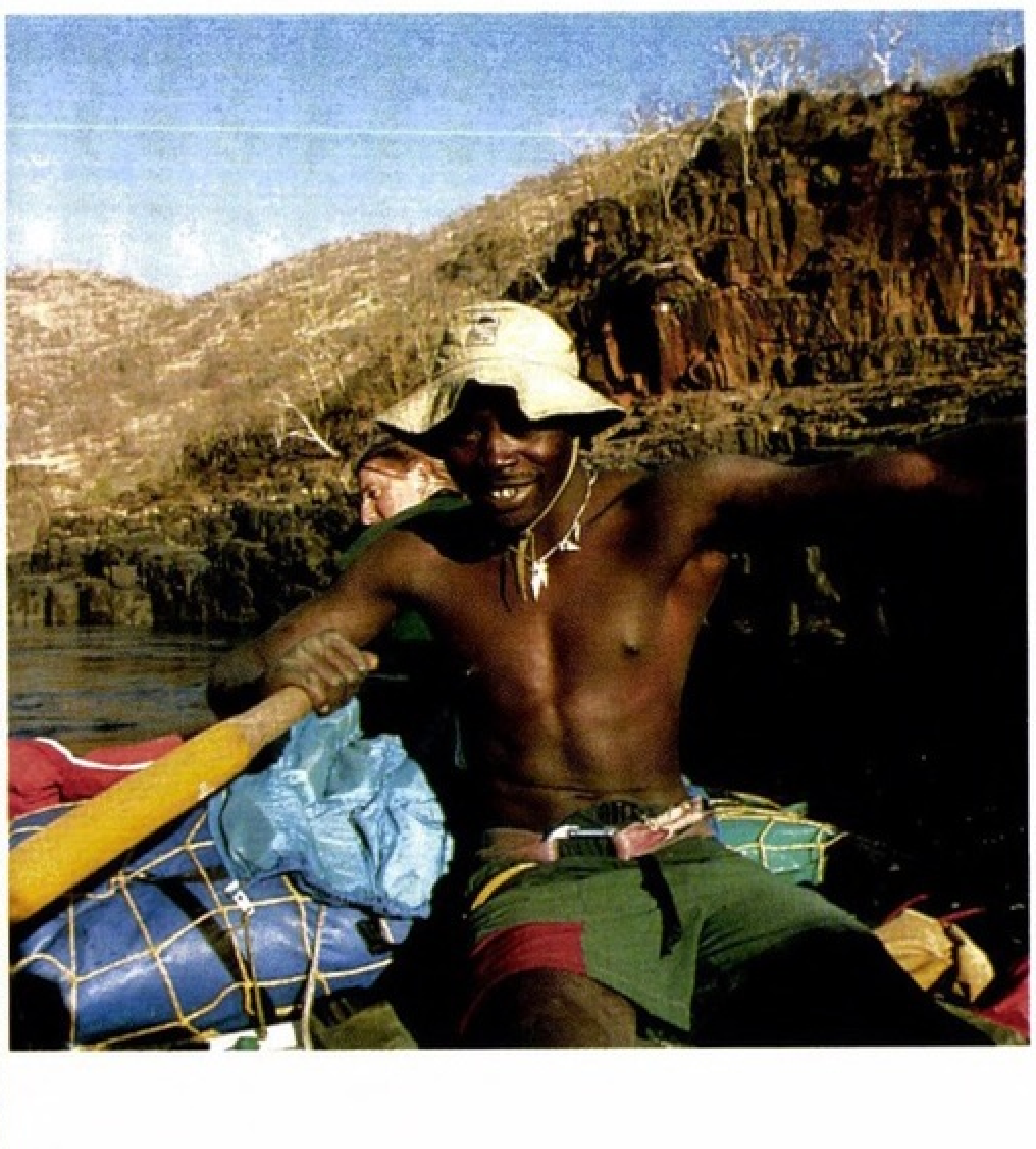
ancestors, the Padlimiut or Caribou Inuit. For thousands of years these people travelled up the Thelon each summer in search of caribou and wood. We also head upstream with our Inuit companions to an old campsite where the Thelon enters Beverley Lake. Alex Iglookyouak, who is 58 years old and grew up on the land, recounts stories of his youth as we walk among tent rings, food caches and kayak stands. Alex is a fountainhead of information, a living museum. He points out the wooden stakes that once held two caribou skins, that had been sewn together for a kayak cover. He explains how the bleached curved pieces of wood were attached to metal blades to make snow knives; that the circular band of weathered wood was once a frame for a skin drum.

Dozens of tent rings and food caches cover the top of a bluff overlooking the river. As we watch Alex gazing over the land, the world of the past and present seem to intermingle. I expect to see a group of Inuit coming up the river in their kayaks.

People have also been a part of the Zambezi for thousands of years. Ancient pieces of pottery lie on top of the dusty ground along the river, reminiscent of the stone scrapers and flaked pieces of chert found all along the Thelon. Mashona fishing villages, with huts and fences made of wood and thatch, look much as they have for who knows how many centuries.

The Upper Zambezi, from Kazungula to Victoria Falls, alternates between calm stretches bordered by papyrus wetlands and lush forests of waterberry, tamarind, poison pod and other species to exhilarating, but runnable, rapids. Islands break the river up into a maze of small channels in many stretches. The water is silty green. We paddle the fibreglass kayaks past pods of hippos – known locally as 'river pigs'. They remind me of moose among the Ursus Islands along the Thelon, which often dive completely underwater to feed on aquatic vegetation. But the hippos are just resting in the water, not feeding. And unlike the moose, which pose no danger to paddlers, hippos sometimes charge canoes and tip them over. 'If this happens,' Dean says in his emphatic manner, 'swim away from the canoe towards the closest shore. And when you get to the shore, KEEP GOING, BECAUSE YOU NEVER KNOW WHAT'S FOLLOWING YOU.' Another rule: Always keep to the shallow side when paddling around hippos. Crocodiles – known locally as 'flat-dogs' – lurk right next to the shore. I've seen a few big pike along the Thelon, but there's nothing that's close in size or scariness to a big flat-dog. No-one had to be told not to trail their fingers in the water.

Navigating the Zambezi: river guide Paul Matoupos tackles the waters below Victoria Falls.



No-one has to tell you either where the Upper Zambezi ends. The river simply disappears into a cloud of mist. Victoria Falls, *Mosi Oa Tunyo*, 'The Smoke That Thunders' – there is a local beer advertised as 'The Beer That Thunders'.

The trip through the gorge is like no other river trip on Earth. In fact, it doesn't look or feel like Earth – but rather more like an alien planet from an early *Star Trek* episode. The river courses between black basalt walls, polished and shiny. Gnarled, twisted trees cling to the steep walls, while *klipspringers* – small, dainty antelope – dance from ledge to ledge. Rock hyraxes, resembling Arctic ground-squirrels but related to elephants, come out of their hiding places to watch us float by. A black eagle, the African equivalent of a golden eagle, is also watching, and one hyrax's curiosity costs it its life.

The river slips, slides, falls and plunges, following a contorted course on what felt like, as Brenda put it, 'a journey to the centre of the Earth'. A few days and many rapids later we see two Mashona fishermen beside the river just above Upper Mowemba Falls, smoking 'gorge bream' – bream resemble small bass, and are delicious – over a fire. The aroma is mouth-watering, and I tell the fisherman that I would offer to buy the fish, but all my money is stuffed away at the bottom of a waterproof pack. They laugh and reply that it doesn't matter, since I will be dead soon in any case. Still laughing, they walk to the edge of the falls for the afternoon entertainment.

Upper Mowemba Falls is a big drop, about three metres. Paul, who shared guiding duties with Barry – Paul was one of the few black river guides – made a perfect run. Drop the back of the raft into a small sousehole at the top of the drop; spin the front around as the raft drops over the falls; ride up on the roostertail shooting between two raft-swallowing souseholes; slide left off the roostertail – there are nasty rocks to the right – into a three-metre wall of water. 'High-side!' Paul orders, as the raft threatens to flip over. We all scramble to the 'high' side of the raft, and somehow we bounce through, laughing and giving each other high-fives.

We are not grinning the next morning, when our raft is gobbled up by a sousehole at the top of Ghostrider Rapid. There are people and packs all over the river. I end up bouncing down the entire rapid, the longest on the Zambezi, over standing waves that seemed as high as the Rocky Mountains. I am beginning to enjoy the ride when I recall the flat-dogs that might be waiting below.

Our high spirits are dampened when we come to the road and cables across the river that mark the site of the proposed Batoka Dam. This hydro-electric development would flood the gorge almost to Victoria Falls, over 120 kilometres away. The dam, which would be the third across the Zambezi, is currently being debated by the governments of Zambia and Zimbabwe, who share a border defined by the river. Last August, as Zambia's Minister for Energy and Water Development announced it's Government's decision against the project, Zimbabwe's Transport and Energy Minister was announcing his Government's intention to build the project on its own.

The Batoka Dam would destroy the homes and ancestral shrines of more than 3,000 families who live along the Zambezi. Local communities are against the dam, which would cost in excess of two billion US dollars, and would destroy the ecologically unique Batoka Gorge, a three-hundred-metre-deep canyon that extends from the foot of Victoria Falls to the proposed dam site. Chief Makuni, who has more than 20 villages in Zambia under his authority, said: 'I would rather be killed...or imprisoned for life than lose our land.' Chief Makuni's sentiments bring back sad memories of the 1950s when the Kariba Dam was built, displacing hundreds of thousands of people and spurring a massive wildlife rescue program.

I think back to the Thelon and the plan for a hydro-dam at the rapids below Shultz lake. A few years ago, a proposal for an uranium mine on the Thelon was put forward. The potential impact on wildlife and the river environment is immense – aircraft noise, road construction, hydro-power development. The sun always shines on the Zambezi; the wind always blows on the Thelon. Surely there are other sources of power.

> *I can easily forget which river the water belongs to*

The evening is so quiet the only sounds I hear are those from within my own body. But when I turn my attention from within to without, there is a sound, or rather the shadow of a sound. Not of blood coursing through my veins or of my heart beating, but a sound that comes from all around. It pulsates, like a distant engine or music playing on a radio. But that's my own mind trying to take the unrecognizable, and force-fit it into something familiar. Perhaps it is the sound of the earth turning, or of tectonic plates grinding together. Perhaps it is the universal 'Om'. But whatever it is, it can only be heard in the earth's wild places, such as the Thelon River or the Zambezi.

As I sit quietly beside the water, I easily forget which river the water belongs to. For though these two rivers are half a world apart, they have much in common. They share the same wildness, and perhaps the same spirits. Rivers know no boundaries. ■

Max Finkelstein works with the Ottawa-based Heritage Rivers Program. He helped organize an expedition to the Thelon and Zambezi rivers in order to bring international attention to the need to recognize and protect them. Another version of this article appeared in *UpHere* magazine.

Conversation with a maverick

Richard Swift interviews the man in the forefront of the defense of the world's river eco-systems.

INTERNATIONAL RIVERS NETWORK

International Rivers Network President Phil Williams challenges big-dam funding at the World Bank's annual meeting.

Phil Williams is not your usual consulting engineer. Sure he still works as a consultant in hydrological engineering – although the fees aren't what they might be and the clients don't all dress in suits. But his passion is less for building things on rivers than for rehabilitating rivers already overbuilt. It is for this reason that he helped set up the International Rivers Network back in 1985.

What was the thinking behind the establishment of the International Rivers Network?

In the early 1980s rainforest issues, ozone depletion, global warming were all getting lots of press. But a major aspect of the global environmental crisis not receiving the attention it deserved was the destruction of the world's free-flowing rivers and what that meant for our fresh-water resources. The destruction of watersheds, erosion, siltation, agricultural and industrial pollution, channelization and the draining of wetlands were all chronic problems. But the most acute threat comes from the development of mega-dam technology in the last 50 years. We now know what the true ecological, economic and social costs are when you build big dams that transform river eco-systems. Yet these costs were being deliberately ignored by the self-serving dam-building lobby. So the idea of the Network was born out of a group of engineers, activists and scientists who shared this concern.

IRN works with local groups at their request to build coalitions internationally.

WANG GANG FONG / PANOS PICTURES

Peaceful market day in Sichuan Province: but all this and more will be submerged by the Three Gorges Dam.

Now there are some situations where you have dictatorships like that in China where we do work with external critics of the Three Gorges project on the Yangtze. But we are very clear that we are only articulating the criticisms of that project that have been made within China by Chinese scientists and journalists but are now repressed.

You are based here in San Francisco. Was California a model for the kind of mega-engineering of rivers that is now taking place in the Third World?

For sure. We still get groups of foreign engineers taken on tours to see the grandiose construction here in California. They are shown these verdant fields of orange groves and crops grown with irrigated water. But they are not told the truth about what happened here. They never find out the water is being delivered at a small fraction of the cost of what it actually took to build these projects. What you have here is a taxpayer's subsidy from the rest of the US to Californian agriculture – already one of the wealthiest sectors of the economy. So poor sharecroppers in the Southern US paid taxes to support agribusiness growing cotton in California. Look all around the world and you see the same dynamics at play. It's politics. Even though such projects do not make economic sense and large numbers of people can be impoverished by them, the power of the lobbies behind big water projects – construction contractors, politicians, agribusiness, the wealthier urban class – is enough to push them through.

Is this public subsidy in California similar to the kinds of debt Third World governments have run up when they get into large-scale dam construction?

Absolutely. In California we are now living in the post water-development era and trying to deal with the economic and ecological fallout. Such projects could never be built in the present political climate – the voters would never stand for the huge subsidies of 30 or 40 years ago. But the same thing is still happening in the Third World. The World Bank comes in and offers to provide the funds for these projects. But the pay-back is from the economy at large. With real economic accountability these projects simply wouldn't get built. The dam-building era practically stopped dead in the US in 1986 when Congress enacted a modest requirement of cost-sharing by the beneficiaries of water development schemes. But overseas, with funding agencies like the World Bank and the Asian Development Bank, there is no economic accountability. Even the cursory evaluations they do of narrow cost/benefits show many of these projects are not working. They never evaluate the long-lasting environmental impacts.

Why then do politicians agree to fund such projects?

Stalin used hydro-electric dams as a symbol for transforming his society – hydro-electricity and communism were integrally linked. When the Volga was dammed thousands of people were forced into collective farms or off the land entirely. The idea was the same in the thirties with the Tennessee Valley Authority (TVA) – although the methods were more benign – to transform the economy of one of the most depressed areas of the US. Dams were a panacea that would bring education, public health, better living standards. But no one measured the real costs of uprooting communities or flooding the best valley-bottom land. Recent studies have shown that counties in the TVA service area are economically somewhat behind adjacent counties that were not disrupted by these huge power dams. At least in the US people have some chance to adjust but in the Third World people's land is everything – you take away that land and you are condemning people to a life of poverty, disruption of culture and lack of choice. The estimates now are that, worldwide, a million 'reservoir refugees' a year are being uprooted from their homes. They end up being resettled on marginal land or starting from scratch in the slums of the nearest city.

What has the IRN focused on recently?

The Mekong scheme, the Hidrovia project in Latin America, the Arun III project in Nepal, the Three Gorges Dam on the Yangtze, and the Narmada Dam struggle in India. We are still following the Bangladesh Flood Action Plan and the campaign there has really had a substantial impact in slowing up and scaling down that plan. The levees on the Mississippi that provided the model for the Flood Action Plan actually made things worse in the big floods there two years ago. The city of St Louis may actually have been saved from flooding by levee failure upstream. The whole concept of engineering through flood management levees that increased flood levels didn't seem to make much sense anymore.

One of the IRN strategic targets is the funding for these projects because they don't make any economic sense and the clearer that argument can be made the easier it is to knock these projects off. This is where funders like the World Bank are most vulnerable. The Bank is the ideological leader in promoting big dams. It is very insular and slow to learn from its mistakes. It is promoting development strategies that impoverish the poor and are ultimately self-defeating for the survival of the Bank as an institution. We publish a newsletter called *BankCheck* that gets the word out about the Bank and its activities.

Short ferry ride across the Mekong but a long struggle to save the river from the fantasies of hydro-engineers.

JEAN-LEO DUGAST / PANOS PICTURES

At the moment I think the situation on the Mekong is a key battleground. We have just seen a treaty signed between the four Mekong countries (Laos, Thailand, Cambodia and Vietnam) that says all the right things about substantially how to manage a river. And now there is a set of proposals to build a staircase of dams put forward by the Mekong Secretariat that completely ignores all the fine sentiments about sane river management in the treaty. We are trying to put pressure on organizations like the United Nations Development Program to get the Secretariat to live up to the treaty. We need to involve the people who live on the river in planning their own future. We need to respect all the resources of the Mekong and not just sell its hydro potential off to the highest bidder.

Phil Williams rows the Brahmaputra in Bangladesh – the site of one successful river defense.

IRN

Do you think it's an exaggeration to say there is a worldwide movement emerging in defense of the world's river eco-systems?

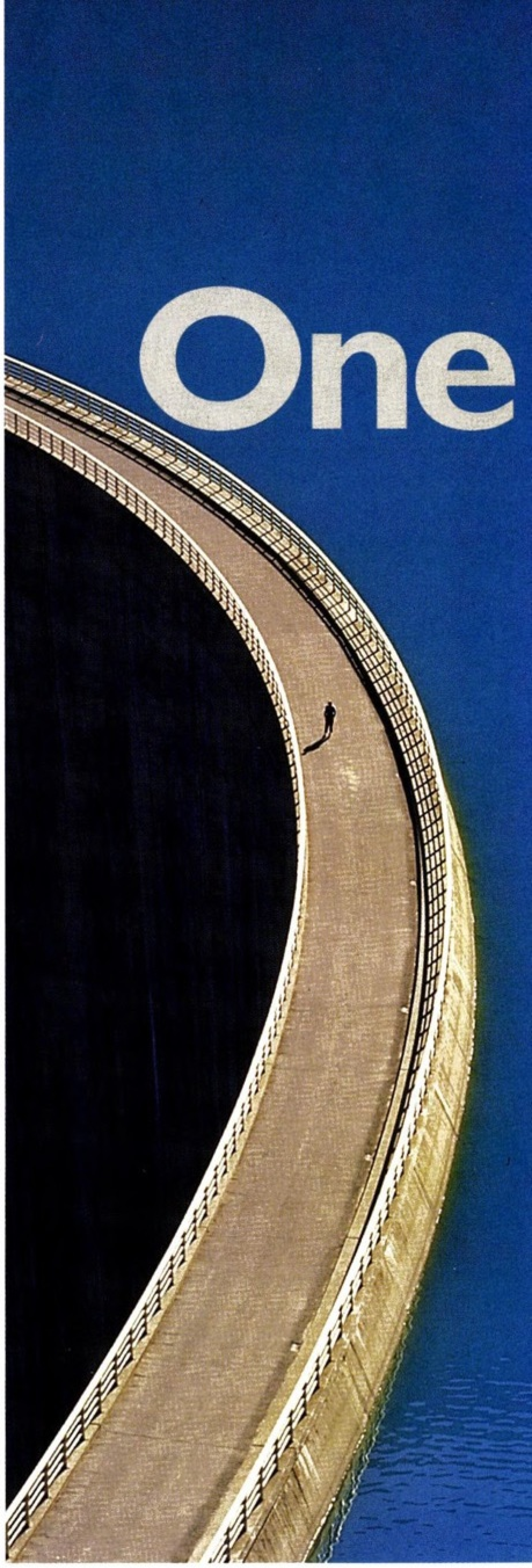
Oh no! Its absolutely true that this is happening. I think the turning point came in 1989 at Harsud in the Narmada valley. Forty thousand people showed up for a demonstration to protest the World Bank funding of the Sardar Sarovar project. These were local poor people. This demonstrated vividly the hypocrisy behind Bank claims that the criticism of their dam projects was from a bunch of élitist Western environmental groups who didn't really care about Third World poverty. This local coalition in combination with the international dam-fighting movement actually did force the Bank out of this project. The Indian Government, out of misplaced national pride, has unfortunately taken it over. But the Bank's retreat emboldened critics around the world to challenge these projects. So despite the fact that Sardar Sarovar is going ahead, the help that the people of the Narmada Valley have given to people all around the world is absolutely immeasurable.

Do you see any role at all for dams or do you see them as a totally outmoded technology?

Theoretically it's possible to find a role for dams. There are circumstances where a project might be economically justified. It might be worth spending a billion dollars to develop a water supply for a city. Then you have to look at the environmental and social trade-offs. People affected need to have a voice in these types of decisions. But none of the projects we have seen, including those here in the US, have met these standards. The economics have not made sense. They have been shrouded in secrecy. There are huge technical flaws in their planning. They completely disregard long-term environmental damage. I have an open challenge to the World Bank and the International Commission on Large Dams to 'show me a dam project that I can believe in'.

Who pushes these dams?

Every three years the dam-builders get together as the International Commission on Large Dams – the engineers, the World Bank, turbine manufacturers, construction companies – to slap each other on the back and promote dam technology. Then in 1985 when they met in Zurich Swiss environmentalists showed up. Challenges have been made at their conferences ever since. Dam-builders have been elevated far above what their skills really justify and it kind of goes to their head a little bit. The problem is politicians do not understand that river-systems management is not dam-building. The dam-builders of course are not inclined to tell them. They choose dams as the only way to generate energy rather than looking at alternatives. Hydropower is one of the most expensive ways to generate electricity. There are plenty of other technologies available that are quicker and more ecologically benign: small gas-turbine energy or micro-dams to name just two. You really need more sophisticated skills when dealing with a river basin than those of the hydraulic engineer: you need to know how the eco-system responds to the river and how the river will respond to changes and how people live with the river. ■

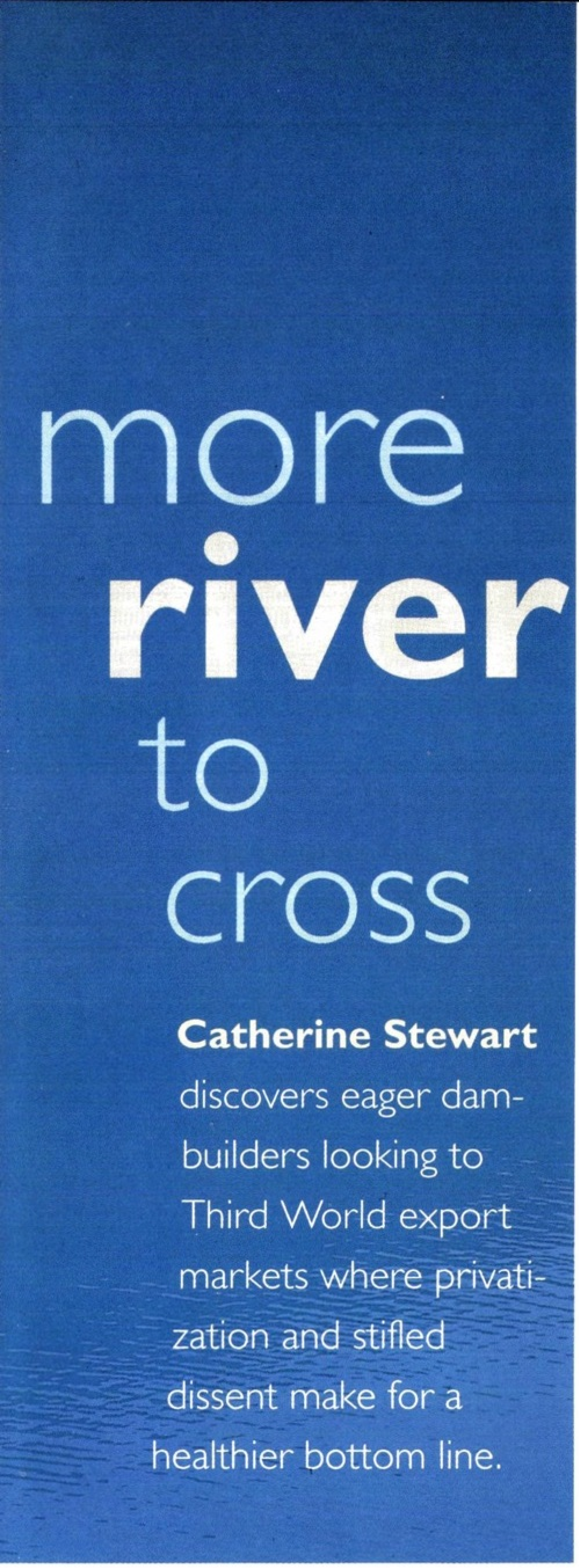


SCHWEIZ & WALLIS / ROBERT HARDING

THE FIRST TIME the graveyards flooded was in the early 1950s. Cheslatta T'en elders can still remember the bones and bodies of their ancestors floating away into Cheslatta Lake. Alcan (the Aluminium Company of Canada) erected an aluminium plaque to mark the occurrence. The aluminium was produced using the power from the Alcan dam responsible for the flooding.

The Cheslatta Nation's fight with the company lasted 45 years. But it bore at least some fruit when the provincial government of British Columbia stopped Alcan's Kemano Completion Project – also planned for Cheslatta territory. BC's decision is part of a growing trend in the northern hemisphere.

Quebec has shelved Great Whale. The vast series of dams that would reshape the James Bay coast and the lives of every living creature in the region is now on hold. Further west, the Lone Star fighters and their leader, Milton Born with a Tooth, may have



more river to cross

Catherine Stewart discovers eager dam-builders looking to Third World export markets where privatization and stifled dissent make for a healthier bottom line.

put an end to Alberta's Old Man Dam. In the US the Two Forks Dam project in Colorado and the Auburn Dam proposal on California's American River have been abandoned. According to Daniel Beard Commissioner of the US Bureau of Reclamation, builders of the massive Hoover and Grand Coulee dams, the 'dam-building era in the US is over'.

This is also true elsewhere. In a stunning victory for activists, the Australian High Court halted Tasmania's Franklin River Dam project. By 1994 Australian scientists were proposing a plan to drain a huge dam reservoir created 20 years earlier when Tasmania's Lake Pedder was flooded for power generation. In Japan farm communities have generated enough pressure to force the Hokkaido Government to alter the Chitose River diversion scheme.

As the effects of river engineering gain notoriety, funding agencies like the World Bank are being called to account for similar mega-projects in the Third World. Since 1948 the Bank has invested $50 billion in 500 large dams in 92 countries that have displaced some ten million people from their homes. But the Bank has now drawn the line at funding China's Three Gorges Dam on the Yangtze. Could this be the beginning of the end for mega-dams in the South as well?

At first glance it looks hopeful. In July of this year an Indian Government committee recommended halting construction work at ten dam sites. On 4 August the World Bank pulled the plug on funding for Nepal's one-billion-dollar Arun III hydro project.

But dig a little deeper and you'll find that the business of dam-building in the South still goes on at a phenomenal rate. The difference is that dam-building, like so much else, is being privatized. Engineering firms in the US and Canada, Norway, Italy, France and Japan could flourish if dismantling major water works gets on the agenda. But we have learned to bend the land and the biggest of rivers to our will. It can cost millions, but also bring in millions in industry, jobs, profits and corruption. Such skills will not be left idle. If a bunch of eco-freaks are messing up the gears at home, then it's time to think export.

By now it's an old formula. Just as we send our bundled plastic wastes to be melted down in Asian sweatshops; as we search the world for toxic waste dumps; as Canada exports Candu nuclear reactors to Argentina and Korea, and as France tests atomic weapons in tropical lagoons, so we export our mega-dam technology to the South.

China's Three Gorges dam will be the biggest in the world. Construction began in 1993 and by the time it is completed the dam will stretch a mile wide and have eight times the generating capacity of the huge Aswan Dam on the Nile. It will flood 350 miles of river canyon and create an inland sea some 392 miles long. It will also displace more than a million people and no-one knows if it will be able to withstand earthquakes. It is, as one observer put it 'the final pharaonic craziness of a dying totalitarian regime' and could only be accomplished by an autocratic state. But foreign companies don't seem to mind. Caterpillar of the US and CAE Electronics Ltd have both signed contracts for work on Three Gorges and are actively pursuing more. Management information systems for Three Gorges will be supplied by Agra Industries of Calgary for $25 million. Merrill Lynch, the US investment giant, is involved in the financing. A consortium of 15 Brazilian corporations has formed the 'Three Gorges Brazilian Joint Venture'. Bridon of Doncaster in England has also jumped on the bandwagon. Meanwhile, Human Rights Watch Asia warns foreign firms to be on their guard against forced labour 'employed' by Chinese sub-contractors.

Such investments are part of a trend to privatize infrastructures – and not just in China. The US Overseas Private Investment Corporation recently reported that in four years the privatization of projects in the South, from airports to telecommunications, has increased 15-fold. A decline in government monopolies has opened the door to the transnationals. Another dramatic example of this new colonialism is unfolding on the once free-flowing rivers of Laos. Seventeen major hydroelectric projects are slated for the Se Kong river alone – the largest Laotian tributary of the Mekong. The goal is to export power to the burgeoning Thai industrial economy. There public protests following repeated dam failures and severe flooding have forced a halt to major dam construction. Now the rapidly industrializing Thais intend to use the jungle next door.

With three dams in operation, electricity has become Laos's third-largest export earner. South Korea's Daewoo Corporation, Electricité de France, Transfield of Australia and the Tasmanian Hydro Electric Commission's Enterprise Corporation have all climbed on board. According to the Asian Development Bank, the bulk of the money for Laos's dam development is coming from private sources. Thai, Cambodian and Vietnamese logging firms are currently clearcutting forests in anticipation of dam construction. Laos's southern Attapeu province, site of the Tasmanian investment, holds part of Indochina's largest tract of virgin tropical rainforest. The dam projects there will flood 190 square kilometres of 'environmentally protected' forest land. Fish populations, which provide up to 90 per cent of local protein source, may be virtually destroyed.

So, despite hopeful signs from the North and the growth of grassroots campaigns in the South, river-engineering goes on unabated. The dream of 'modernizing' the southern hemisphere lives on. Northern banks and engineering firms will use all the ingenuity at their disposal to make the nations of the South 'just like us' – living examples of energy waste and resource depletion. Yet it would be unconscionable to deny the reasonable power needs of the planet's poor. We must demand that our governments do more than just reduce energy waste in the North. Let us also restrict the sale of our destructive technologies and encourage the export of the best of solar, wind and energy-efficient technologies. If we cannot do this, eventually the gigantic power grids, the reservoirs and the engineered rivers will run down the very last of the biodiversity that sustains all our lives. ■

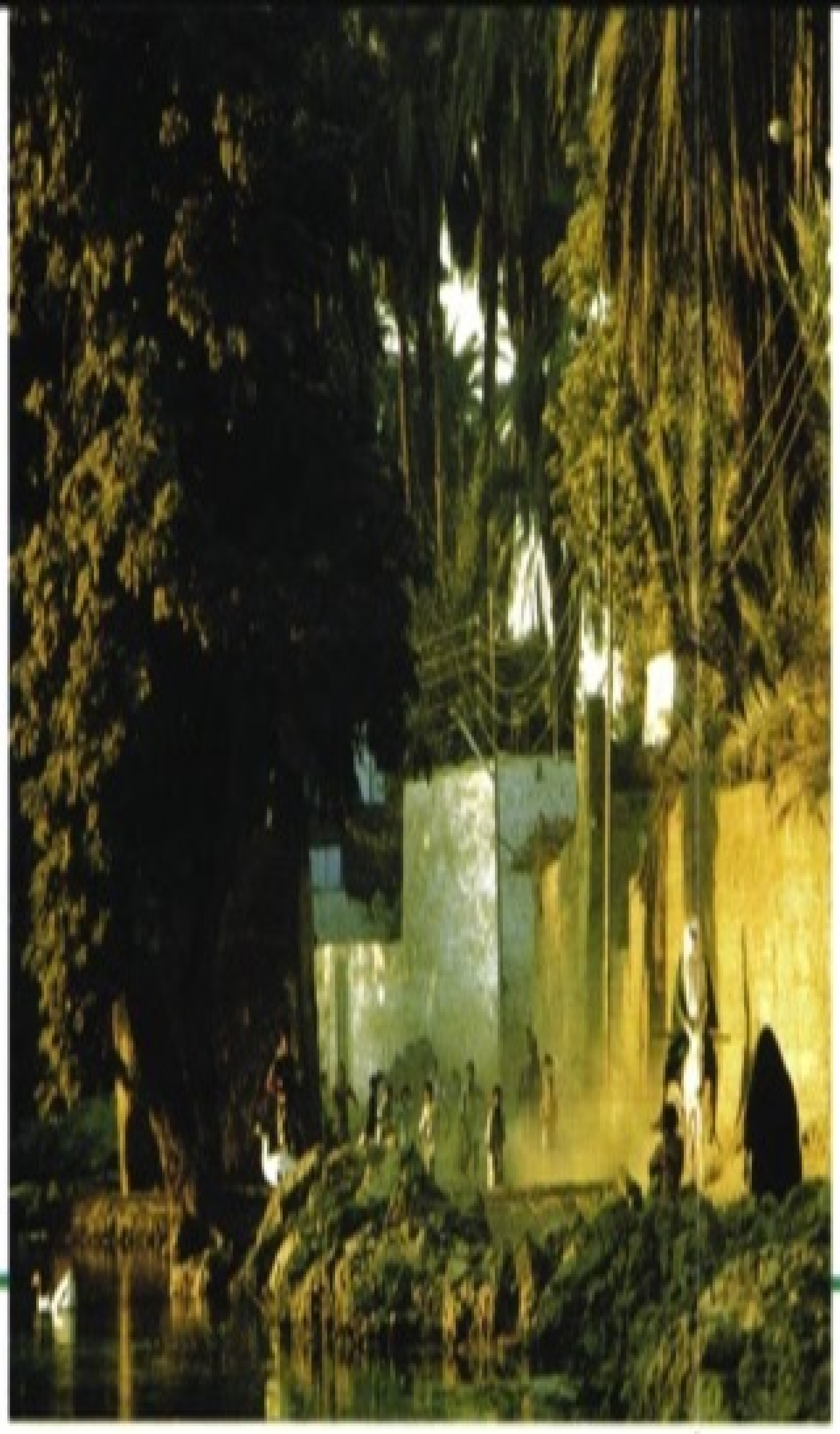
Catherine Stewart works on fishing and water issues for Greenpeace in Vancouver.

RIVERS
THE FACTS

For centuries the great river systems of the South have watered the fields, put fish on the table and acted as avenues of communication with the outside world. Their importance gives them a crucial place in the cosmology of myth and religion. But now rampant industrialism has brought competing demands that threaten both traditional ways of life and the river eco-systems themselves.

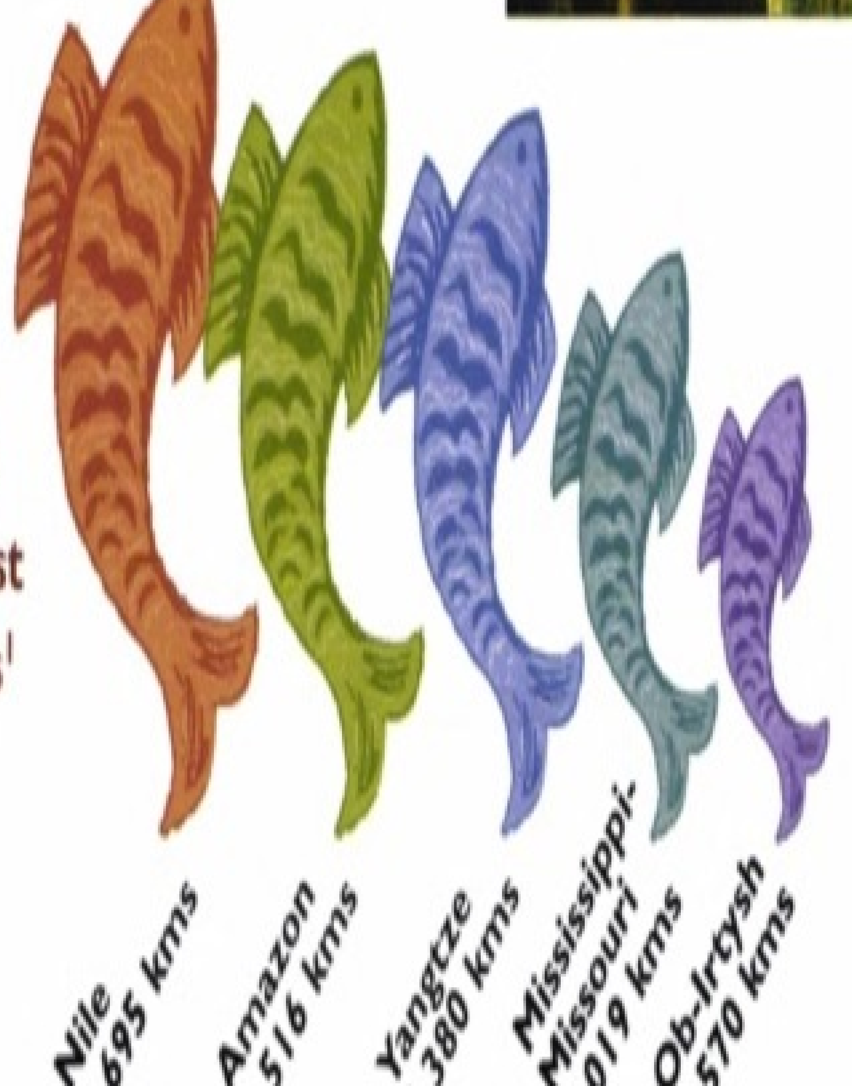
The Nile

ECO-SYSTEM: The longest river in the world. The Blue Nile rises in the Ethiopian highlands and the White Nile flows out of Lake Victoria through the tropical plains of Southern Sudan and the great Sudd swamps. They join together just north of the Sudanese capital of Khartoum and their combined flow survives the arid journey through the Nubian and Arabian deserts to the Mediterranean. Almost all Egyptians live clustered close to the Nile's banks.


AMEDEO VERGANI

THREATS: The Aswan High Dam – one of the world's largest – has proved a mixed blessing. One gallon in five of the Nile's water evaporates from Lake Nasser behind the dam. Lack of silt and improper drainage in downstream fields means serious problems with water-logging and salination. Dependable water supplies mean new agricultural production but often for thirsty export crops like cotton. Sea erosion and lack of silt have reduced the Nile's fertile delta and the river is now a mere trickle at its mouth.

Top 5 longest Rivers[1]



The Amazon

ECO-SYSTEM: The largest river in the world in volume of water and drainage area and one of the world's widest, varying between 6 and 10 kms. Originating in Peru, it carries 1,000 million tons of sediment a year into the Atlantic Ocean in Brazil and the patch of brown at its mouth can be seen darkening the South Atlantic in satellite photos. Vast reaches of the Amazon basin are still essentially unmapped and little-known.

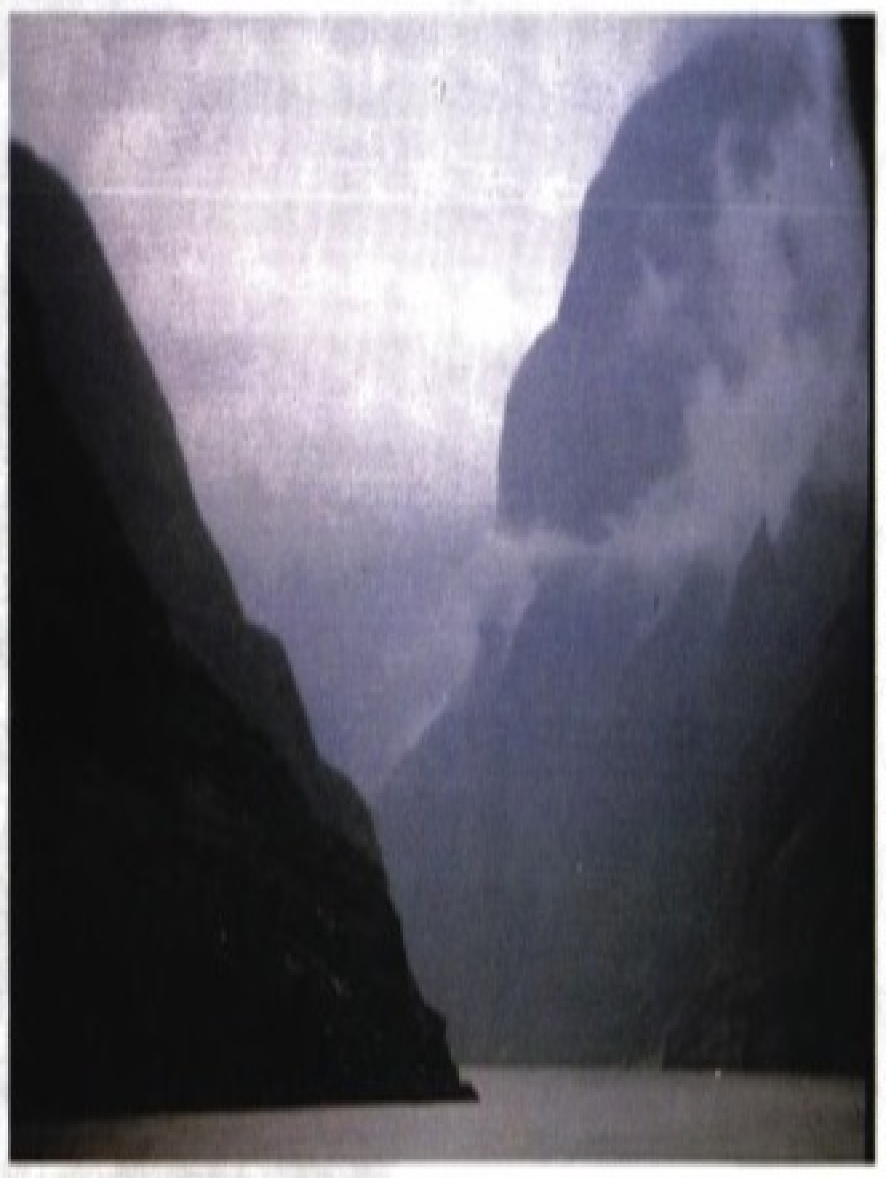
BRUNO BARBEY / MAGNUM

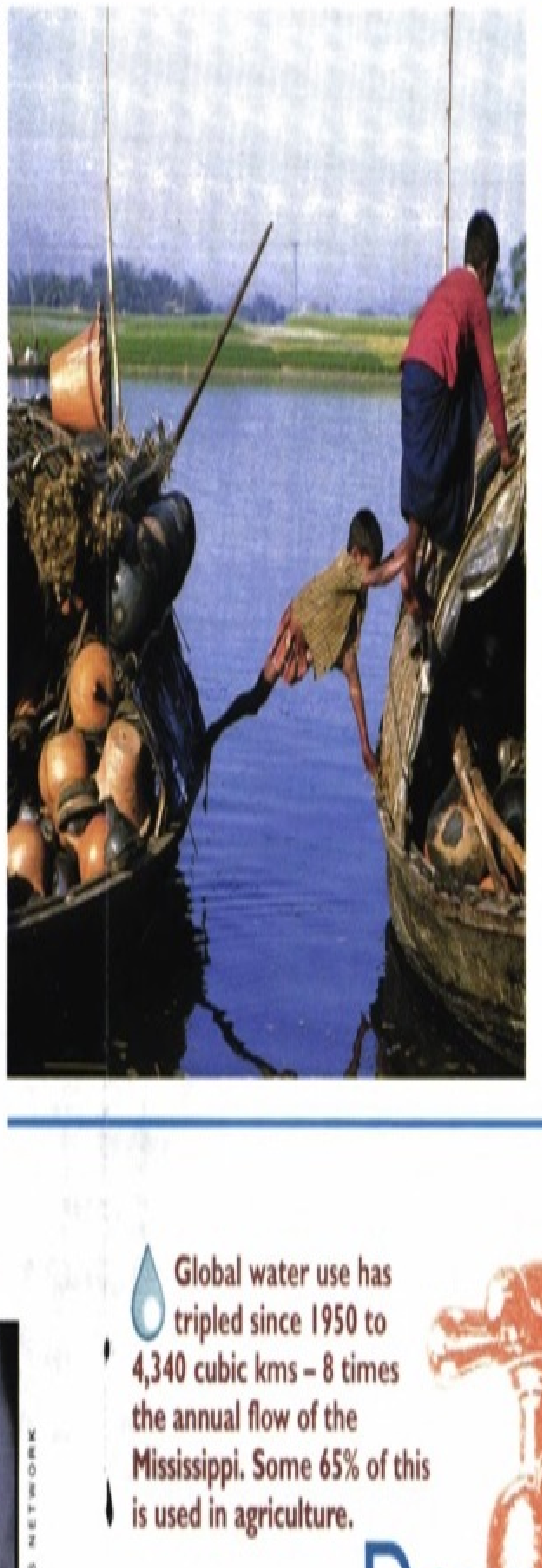
THREATS: Massive logging campaigns have dramatically increased erosion and caused international concern that rainforest destruction will contribute to ozone depletion and global warming. While the slow-flowing Amazon has been saved from dam construction, Brazil's official 'Plan 2010' envisages 80 dams on its tributaries. Dams like the Balbina on the Vartna are flooding arable lands, uprooting inhabitants and adding to rainforest destruction. Watershed stability is threatened by clear-cutting for cattle rearing.[4]

The Yangtze

ECO-SYSTEM: Known as the 'Long River' or 'The River of Golden Sand', the Yangtze is the longest river in Asia. It rises in the Tanglha mountains very near Tibet and flows through Szechwan and Hunan to enter the Yellow Sea near Shanghai. Some of its 600 million annual tons of mud and silt, gets deposited on its fertile delta and Chongming Island at the river's mouth. The Yangtze has 700 tributaries and its drainage basin covers 20% of China's total land area.[6] One in 13 people on the planet live in its basin.

THREATS: The Yangtze's dangerous floods have drowned 300,000 people this century alone. For centuries a system of dikes held back floods – some as ancient as the eighth century are still in working order. The Three Gorges Dam will be the world's biggest and is projected to control flooding and provide energy-inefficient Chinese factories with hydro-power. It will cost $20 billion, take 20 years to build and flood a million people from their homes. Some 300,000 farmers will lose their land and controversies rage on the dam's effectiveness in controlling floods and long-term social and ecological costs.

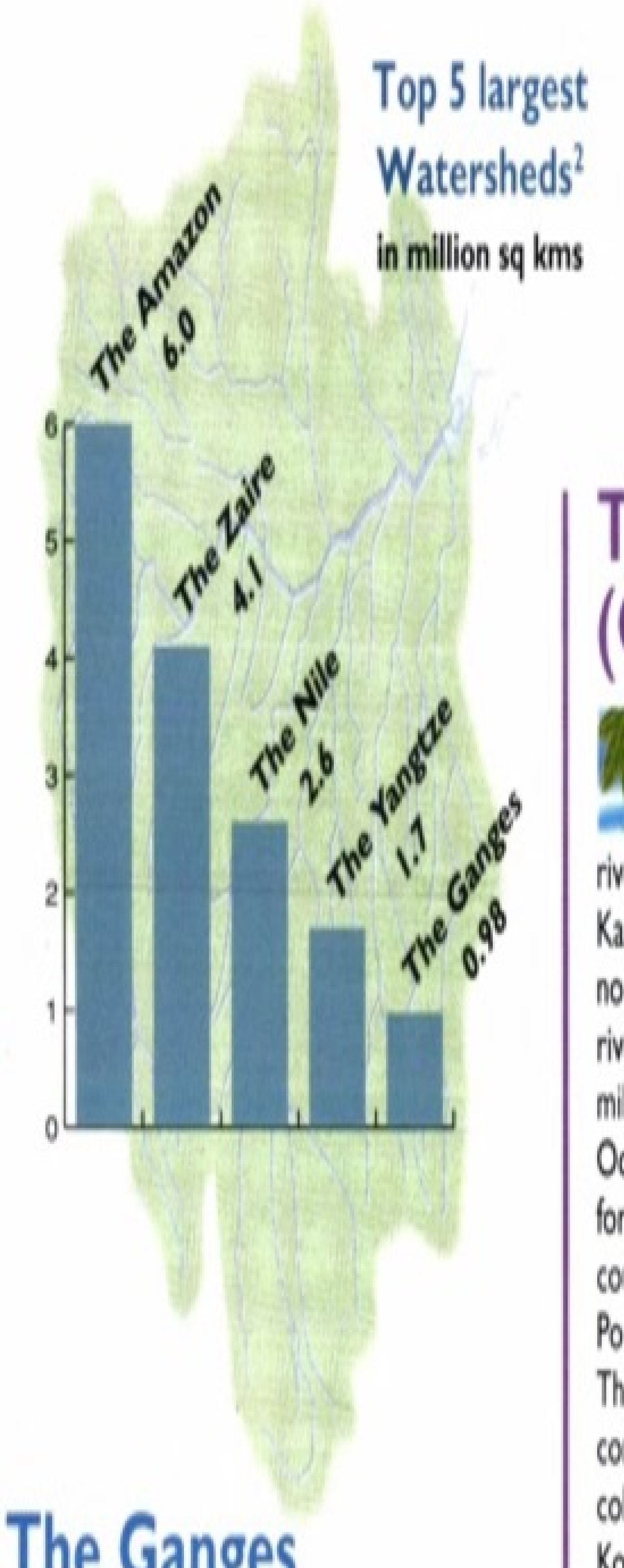

DAVID DAWDY / INTERNATIONAL RIVERS NETWORK


DAVID CONSTANTINE / PANOS PICTURES

The Ganges

ECO-SYSTEM: The Ganges rises in the Himalayan glaciers in the mountainous region of the north Indian state of Uttar Pradesh. It flows 2,480 kms through India to enter the Bay of Bengal where it forms one of the world's largest deltas made up of Bangladesh and the Indian state of West Bengal. The width of its flood plain varies between two and eight kms.[5]

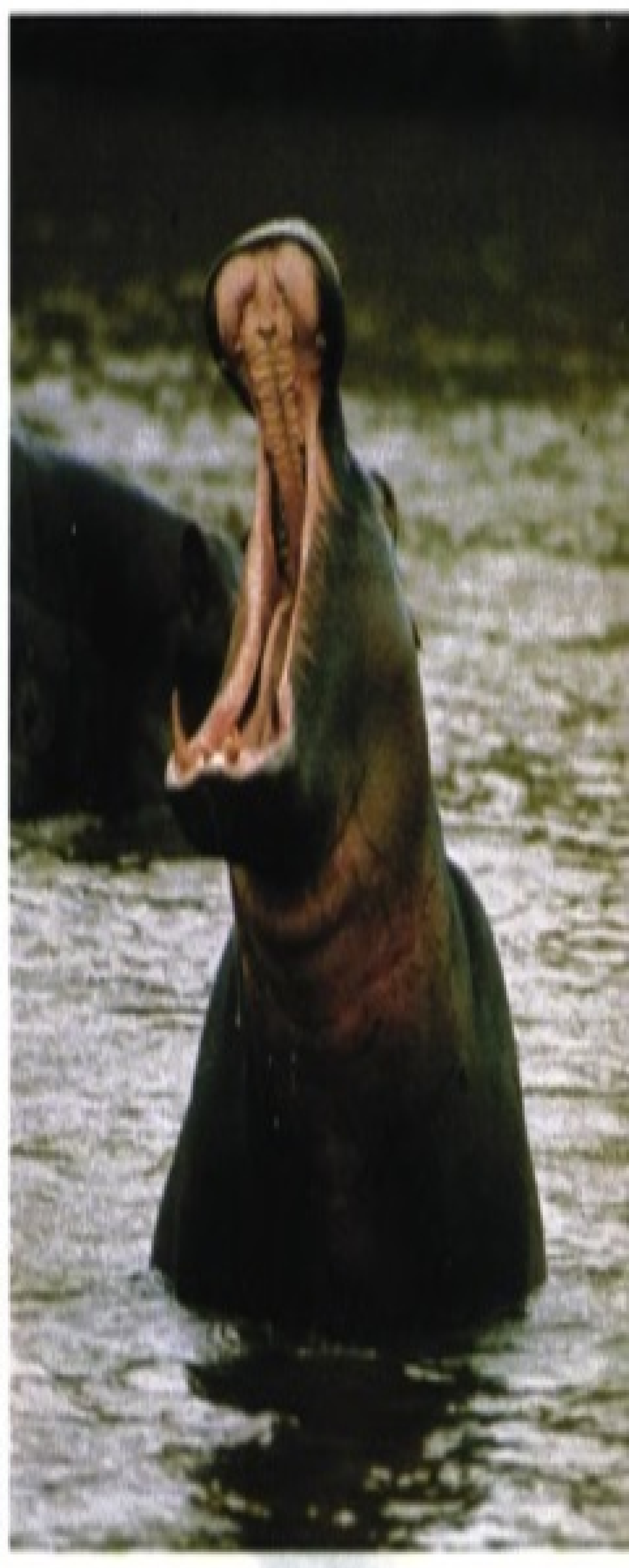
THREATS: The waters of the Ganges are considered sacred in Hindu mythology, but are nonetheless heavily polluted, partly from the 40,000 people cremated yearly at Benares, but mainly from the distilleries, refineries, chemical factories and fertilizer complexes along the banks, especially at the city of Kanpur. Earthquake danger due to over-damming endangers over 100 villages and the town of Hardwar.[5] Large-scale irrigation projects started a century ago and 500 new ones in the last 40 years have displaced millions of poor farmers and altered the volume speed and silt load of the river's flow.


Top 5 largest Watersheds[2]

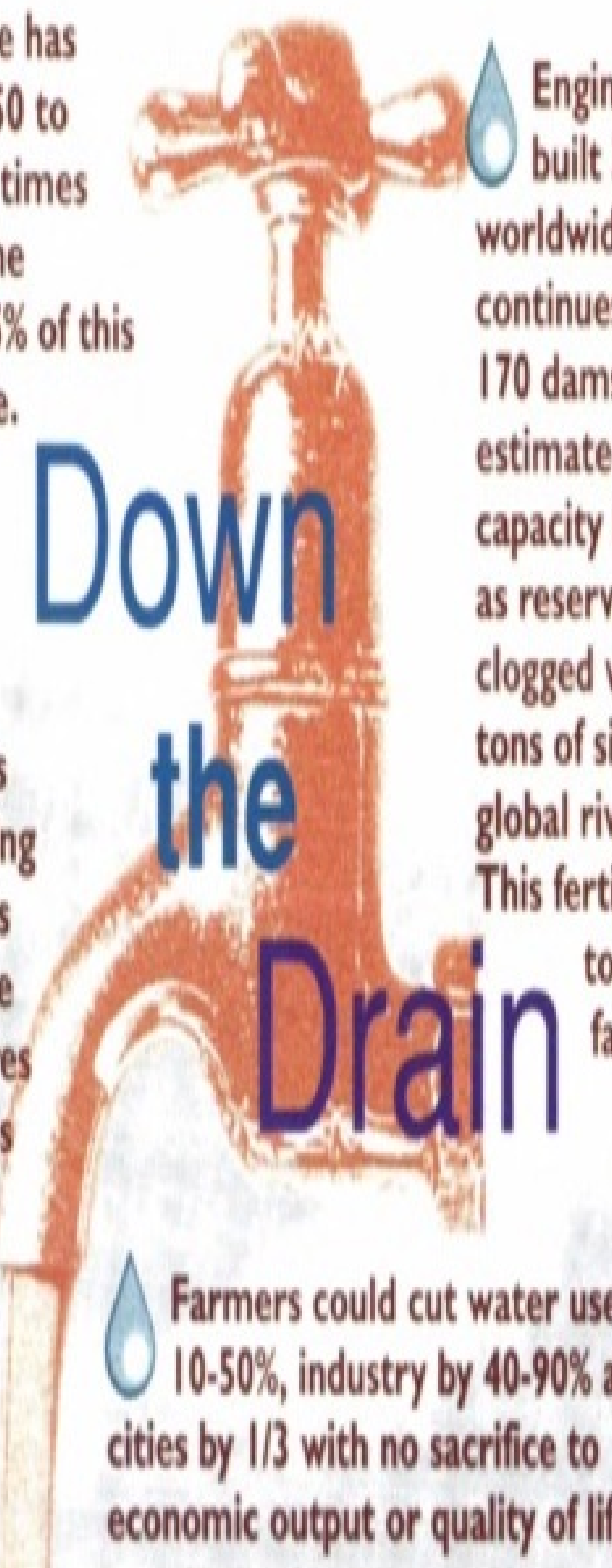
in million sq kms

The Zaire (Congo)

ECO-SYSTEM: The source of the Zaire (meaning river) is the Lualaba river which rises in the Zairian province of Katanga near the Zambian border. It heads north, then west, then south swallowing river after river in its rush to discharge 1.4 million cubic feet per second into the Atlantic Ocean. The banks of the Zaire are heavily forested and its relatively slow and navigable course is punctuated by wild rapids at the Porte d'Enfer and the Stanley and Inga Falls.[6] The Zaire has long been an African trade and communications route, home to several pre-colonial kingdoms like the Luba inland and the Kongo near the coast.


ABBAS / MAGNUM

THREATS: Despite the Inga dam and power site and some localized pollution the Zaire is largely unaffected by industry. Overfishing is a potential problem. But blueprints to divert a massive amount of flow north into the Sahel to solve drought problems there have the support of Zaire's President Mobutu. This would be one of the largest-ever water diversions – in one version carrying 100 cubic kilometres of water annually (more than the flow of the Nile). The developmental and ecological problems of cutting the Zaire's flow and transporting the fish, insects and diseases of tropical rainforest into a semi-arid desert are unimaginable.



Down the Drain

Global water use has tripled since 1950 to 4,340 cubic kms – 8 times the annual flow of the Mississippi. Some 65% of this is used in agriculture.

More than 10% of the world's irrigated land suffers from yield-suppressing salt build-up which is spreading at the rate of 1.5 million hectares a year. Currently less than 40% of water used in irrigation ends up benefiting crops.[3]

Engineers have now built 36,000 dams worldwide. Construction continues at the rate of 170 dams a year. An estimated 1% of dam capacity is lost every year as reservoirs become clogged with a million tons of silt (about 10% of global river discharge). This fertile silt is also lost to downstream farmers.[4]

Farmers could cut water use by 10-50%, industry by 40-90% and cities by 1/3 with no sacrifice to economic output or quality of life.[3]

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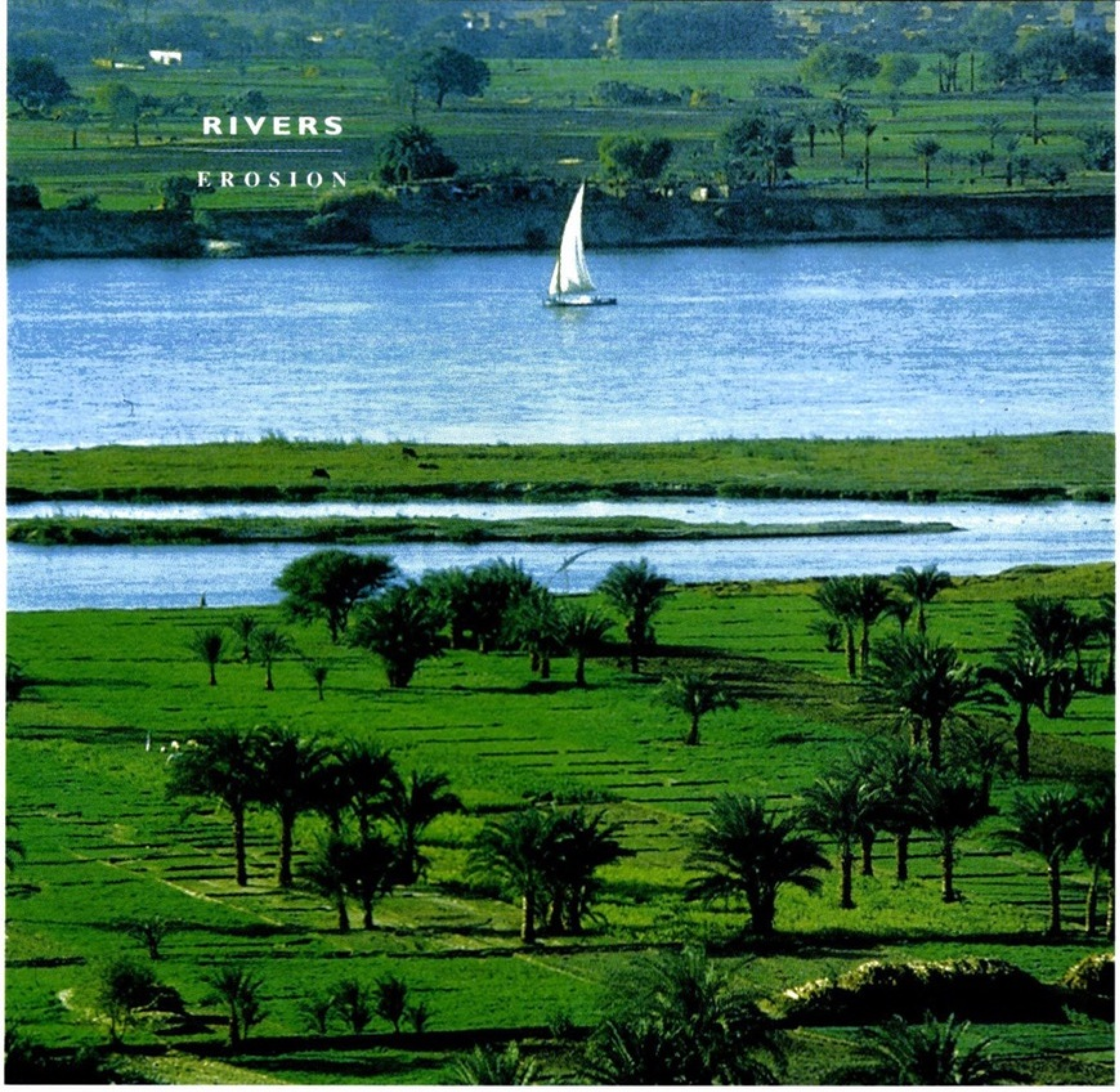
1 *Times Atlas of the World* (1985). 2 *Encarta* '95 (Microsoft). 3 *Last Oasis* Sandra Postel (WW Norton, New York 1992). 4 *The Dammed* Fred Pearce (Bodley Head, London 1992). 5 *The Ganges: Great Rivers of the World* George F Mobley (National Geographic 1984). 6 *Encyclopaedia of the World's Great Rivers* (Rand-Macnally, New York, 1980).

BACKGROUND PHOTO: IMPACT VISUALS / RICARDO FUNARI

A tale of two rivers



Lifestream of Egypt: but the Nile's controlled flood is no longer fertile.

AMEDEO VERGANI

Delta blues:
The Nile

When it was built the High Aswan Dam was the pride of Egypt's economic independence and the joy of a bright development future. But as **Karim El-Gawhary** discovered, even the world's more successful dams come with a price.

'GREETINGS TO YOU, Nile-God Hapi, who enters this soil to give the gift of life to Egypt. You are the wave which spreads over the fields. You give life to all with thirst, you create wheat and barley and because of you the temples wear their festive dresses. But if you miss your time, people drown in misery; if your water dries up, people waste away and fear spreads among the herds and both big and small suffer the pains of torture.'

The ancient Egyptians believed that Hapi lived in a cave between sand dunes of the Western desert and the rocks of granite of the Eastern bank, just below the southern Egyptian town of Aswan. There, on the walls of the temple of Philae, Hapi is depicted as a human being with the waters of the Nile gushing out of his nipples. Once a year Hapi flooded the fields of the Nile valley and left a muddy fruitful soil in which the farmers could sow their seeds.

Nowadays, a few kilometres further South of Aswan, Hapi's milk, the yearly flood of the Nile, has been tamed by Africa's largest engineering feat – the Aswan Dam. It is an artificial mountain into which as many as 17 great Pyramids of Cheops could fit. The 'Sadd El-Ali', as the High Dam is called in Arabic, represented the cornerstone of an optimistic development strategy – a modern temple of a new Egyptian civilization. One of the songs known to every child in Egypt at that time proudly announces: 'We said we would build the Sadd El-Ali and we built it – you colonialists! We built it with our own hands.'

The immediate advantage of the project was obvious – year-round irrigation, three crops where there had been only one and agricultural land expanded by about a quarter.

But the Sadd El-Ali has its downside. Thirty years after its construction and a thousand kilometres to the north, its disadvantages are now being felt by the farmers of the Nile Delta, Egypt's breadbasket. Asafaz, a village in the northern part of the Delta, is typical – a main asphalt street, small mosques and a 100 or so one- and two-storey buildings surrounded by flat land as far as the eye can see. The village lies in the midst of rice and corn fields. Only a few trees spread along the gently flowing irrigation canals to give shade to hard-working farmers as they take a quiet lunch break.

One old farmer, Hagg Ibrahim Balawi, remembers the time before the High Dam. He says, 'the soil used to be red like our dates.' This nutrient-rich red silt was delivered yearly by the Nile's waters, but is now deposited behind the Dam. Balawi claims that the red mud gave him better results than today's expensive chemicals. Ministry of Irrigation water-specialist Mahmoud Abu Zeid thinks this is nostalgia. He writes that two-thirds of the silt ended up in the Mediterranean anyway and that today's high level of productivity requires additional chemical fertilizer – with or without the High Dam.

One of the most severe environmental results of the Dam is the increased salinization of agricultural soil. According to Mohamad Abbas Rasheed of Cairo's National Research Centre up to 15 per cent of Egypt's soil faces this problem; other estimates talk about one-third of the soil in the Nile Valley. Without the yearly flood flushing down the valley, the accumulated salt is not washed away any longer. According to Cairo environmentalist Amal Sabri: 'It was simply not a priority: an adequate field drainage system covering all the agricultural areas was not affordable without international help at that time.' She points out that: 'It took until 1974 when Egypt made a political turn towards economic liberalization and became acceptable to financial support from international funding institutions, that funds were made available.'

> ***'The old people tell us that they used to grow watermelons out there, where the waves break now'***

Since 1975, more than half of Egypt's farmland has been provided with a new 'covered drainage system' – permeable pipes which are laid underground so as not to waste valuable farmland. The rest is scheduled for completion by 2010. But the new system has its maintenance problems. 'It needs energy to pump it empty and it takes time to unearth any blockages,' Abbas Rasheed points out. The farmers are constantly complaining.

But the farmers in the northern Delta village of Asafaz do not yet have a new drainage system to complain about. The crops on their fields – even salt-resistant rice – no longer grows with the same productivity. Balawi describes his recent crops as stunted and pale and his fellow-farmers are plainly distressed as they discuss the rising amount of salt in their soil. But Abbas Rasheed thinks the farmers themselves are partly to blame for salination by flooding the water table through overusing freely available water. This accusation is hotly denied by Ibrahim Qishta, a farmer in the northern Delta village of Daraksa. 'We farmers know out of experience how much water to use for each crop. Too much water might kill the crop.'

'The farmers have their own logic,' says Amal Sabri. For centuries they relied on traditional flush-irrigation practices. They are very insecure about the new centrally controlled water supply: 'If a farmer senses that the water delivery can't be guaranteed in the time he needs it, he will use às much as he can when he gets it,' explains Sabri. 'One can't take serious local action regarding salinization and water-logging if there is no security or control.' She believes that the same policy of economic liberalization which brought funds for the new drainage system is undermining the farmers' sense of security. Several years ago the Government withdrew its subsidy of chemical fertilizer. The farmers of Asafaz say that the price has shot up 400 per cent. So they have had to go from not needing fertilizer at all, to getting it at subsidized rates, to having to pay expensive market prices. Now a new tenant law is deregulating the lease of land. It is no wonder farmers feel insecure.

Further north on the coast, erosion is part of the legacy of the High Dam. It started when the British finished a smaller dam in Aswan at the beginning of the century, to store the after-flood of the Nile. The problem was exacerbated by the High Dam. With all waterborne silt deposited behind the Dam, an important feature of coastal protection disappeared. Before the dams a huge yearly river supply of sediment reached the sea and deflected offshore currents. Today this no longer happens and erosion has not merely been measured in centimetres. In the town of Rosetta the sea advanced 240 metres a year – until expensive sea defences were built. Rosetta's old lighthouse now lies several kilometres out to sea.

Some 50 kilometres along the coast towards the West, dozens of villas have fallen victim to the incoming surf and are now surrounded by water. Twenty-five-year-old Abdel Satar al-Zurbi is now putting the blocks of a new sea wall in place. 'The old people tell us that they used to grow watermelons out there, where the waves break now.' He points to one of the breakwaters a good hundred metres out to sea.

A few kilometres away in the fishing village of El-Burg there is an enormous cement levee which was built six years ago to save the village from being sucked into the sea. Some gravestones spookily stick out from the edges of the dunes just where the sea ate into them. Half the village's cemetery was washed away by the sea. 'Thank God,' says one old man, 'We buried our father high up in the dune, so he is still there. Others were less lucky.' The descendants of the buried, mostly fisherfolk, face their own problems. Before the Dam, the village relied heavily on sardines which swarmed along the coast in the months from September to November. The sardines disappeared when there was no Nile sediment to feed on. Abdel Satar al-Zurbi comes from a fishing family. Five years ago they sold their boat. Now he is a worker at the coastal protection project.

Despite the environmental problems, hardly anyone in Egypt condemns the Sadd El-Ali – Egypt's modern temple. Nearly everyone reminds potential dam critics of the same story. At the beginning of the 1980s, seven consecutive dry years hit the Sahel Zone and Ethiopia, the main sources of the Nile. Water behind the High Dam fell to its lowest level ever. Egypt was forced to draw from its vital reserves behind the Dam. The Nile God Hapi 'missed his time' and without the High Dam, people would have died. ■

Resort town of Baltim is tumbling into the Mediterranean without the Nile's renewing silt.

KARIM EL-GAWHARY

Karim El-Gawhary is a Cairo-based journalist.

A tale of two rivers

Spirit trap:

The Mekong

The fisherfolk of the Lee Pee are worried for the health of their river. **Gráinne Ryder** visits the tiny islands of Laos to take the pulse of the Mekong.

BEFORE SUNRISE THE MEN have collected the night's catch from the large lee traps scaffolded over the rushing water. Women sit gutting and chopping the silver-white fish, to get them ready for smoking. 'Not a great catch, but good enough,' says one man, placing his fish on the scales. 'Last season, one of these traps caught over a ton of fish in just one night.'

To many people Laos brings to mind covert bombings, hilltribe refugees and the Ho Chi Minh trail. Twenty years after the war, global institutions like the World Bank and the International Monetary Fund (IMF) now describe this one-time enemy of the West as poor, little and land-locked. This latter-day imagery is more economic than anything else. In fact, Laos is bigger than Korea or Bangladesh and still has a wealth of forests and rivers – the envy of its newly-industrialized neighbour, Thailand.

The Mekong flows through or borders Lao People's Democratic Republic (PDR) for about 1,800 kilometres – from China's Yunnan province in the North to the Khone

A tale of two rivers

Spirit trap:

The Mekong

TERRA

A Laotian fisher checks the family trap: the Mekong current will sweep it away and it will have to be re-built for next season.

TERRA

Preparing the catch of Panyawn fish for the market: but for how much longer?

Falls in the South. Most of the country is mountainous and lies within the Mekong watershed, one of the large Himalayan river basins shared with Burma, Thailand, Cambodia and Vietnam.

Dotting the river and stream valleys are an estimated 7,000 irrigation systems, built, owned and managed by local communities. Some of these systems are several hundred years old – and still work. Small weirs, typically several metres in height, are built across the streams using a lattice of hardwood and bamboo, and filled with rocks and brush. After every rainy season the villagers repair the weirs, using materials gathered free of charge from the surrounding forests.

During the critical time when rice seedlings are transplanted, the elected head of the irrigation system will walk the length of the canals and back every day to ensure that water is rotating from field to field properly, so that every family gets enough water for their crop. But when the forests disappear these irrigation systems start to break down. Then the streams run dry for much of the year and flash floods wash out the weirs.

In southern Laos, where the Mekong swells to 14 kilometres in width every rainy season, the land is surrounded by a sea of water. This stretch of the Mekong is known as See Phan Done (Four Thousand Islands) because in between monsoons the river recedes, revealing thousands of islets. Before the Pathet Lao Revolutionary Party came to power in 1975, See Phan Done was a province in its own right. One of its islands, situated below the great waterfalls of the Mekong, is known as Khone Falls or Lee Pee (meaning Spirit Trap). It used to be the last inland port of call in Laos for French cargo ships. A pier and a railway line across the island, built during the French colonial era, still remain.

Today, See Phan Done is a district within Champasak province and the Prime Minister himself, Khamtay Siphandone, is a son of the Mekong, born on the island of Khong. Through the years of war and revolutionary struggle, fishing has remained the way of life for Mekong islanders. Older islanders remember the days when fish were so plentiful that they would put the rice on to boil before casting their net to catch dinner. The wisest fishermen of See Phan Done know the habits and habitat of about 40 different species of carp, 20 species of catfish and an assortment of other aquatic creatures including stingrays, snakeheads, eels, threadfins, croakers, pufferfish, crocodiles and the legendary river dolphins.

The Mekong fish that local people are most familiar with have complex migratory patterns both for spawning and feeding. Movements with or against the current can be triggered by heavy rains, rapid changes in water level, or the light of the moon. During the high-water season, July to October, many types of fish move into the flooded forests along the Mekong and its tributaries where they gorge on insects, worms, leaves, seeds, fruits and other fish.

For the people of Don Khone, the May and June migrations are the most important because that is when they catch the adult *pangasius krempfii*, a Mekong catfish which is salted and sold in bulk at the market. Weighing up to 14 kilograms, this catfish is believed to migrate over 700 kilometres from the South China Sea to spawn above the Khone Falls.

Fishermen report a gradual decline of fish catches since 1970 and a more rapid decline within the last four years. They believe it may have to do with the introduction of modern fishing gear and the growing market for wild Mekong fish.

In the old days, one village may have had only two or three cast nets made from jute and shared between families. As a local fish-trader recalls: 'When I was young there was one trader, a Chinese, in the district. My father was the first person ever to sell him fish but he had no idea how much the fish were eventually sold for at the market. On the days the trader didn't want any fish, my father would just dump them into the water because he didn't know what else to do. Everyone already had plenty of fish to eat.'

Today one family might have as many as seven small-meshed gill nets made of nylon. People no longer fish just to eat, they also fish for income to buy things like

JEANETTE L ANDREWS-BERTHEAU

boat motors, televisions and rice mills. 'I earn 300,000 to 500,000 *kip* [$400 to $660] a year from fishing,' says a father of four. 'We need this money to buy basic things for the family such as medicine and fuel.'

A Don Beng islander comments on the changes in recent years. 'In the past we never fished the deepwater pools because we were afraid to disturb the spirits. But now with modern fishing gear people are greedier, fishing everywhere, disturbing the fish when they spawn.' People on Don Som blame outsiders for part of the problem. 'People come by boat from way upstream to camp on the banks of our island. They use many gill nets, hunt frogs and spear fish using lights. Some even steal from our vegetable gardens!'

To tackle the problems, the fisheries division of the Ministry of Agriculture and Forests is encouraging communities to take action. Starting in Khone district, over 20 communities have worked out their own rules for fishing practices and seasons. The aim is to eliminate the most destructive practices – such as the blocking of streams when fish need to move out of the big river to spawn and feed — or the use of landmine explosives to catch fish. They encourage signposting of special habitats, such as deepwater pools, as off-limits to fishers in the low-water season.

As one local school headmaster put it: 'With our rules for conservation and management recognized by the district authorities, we are adapting our ways to protect the fisheries for our children.'

But the future of Mekong fisheries is not entirely in the hands of local communities. Following the advice of global financing institutions such as the World Bank, the IMF and the Asian Development Bank, the Government is offering its Mekong tributaries to foreign investors interested in building hydroelectric dams to export electricity to Thailand. Twenty per cent of the total Mekong flow originates in China where the first mainstream dam was completed in 1993 and the Yunnan authorities plan to build at least five more further upstream.

Mekong fish expert Dr Tyson Roberts warns: 'Engineering projects such as mainstream dams, upstream or downstream of Lee Pee, or canalization of the Mekong for shipping may soon destroy the rapids and the fish in them.' Out of 11 dams proposed for the lower Mekong by French and Canadian dam consultants, the smallest is a 238-megawatt diversion scheme at Hoo Sahong, the river channel between Don Saddam and Don Sahong. Currently, there are 58 families living on Don Sahong. Some had heard of the plans, others had not.

'How can they think of touching Hoo Sahong – it is one of two most important channels for fish moving upstream!' exclaimed one man, surrounded by children and fishing gear. 'If they harm the fish, we will die' says one woman with a baby in her lap. 'Everyone here depends on fish.' A woman standing nearby adds: 'We have nothing without the river.' ■

Gráinne Ryder is a Canadian who works with the Bangkok-based environmental group TERRA – Towards Ecological Recovery and Regional Alliances.

The Rivers Movement

◆ Organizations

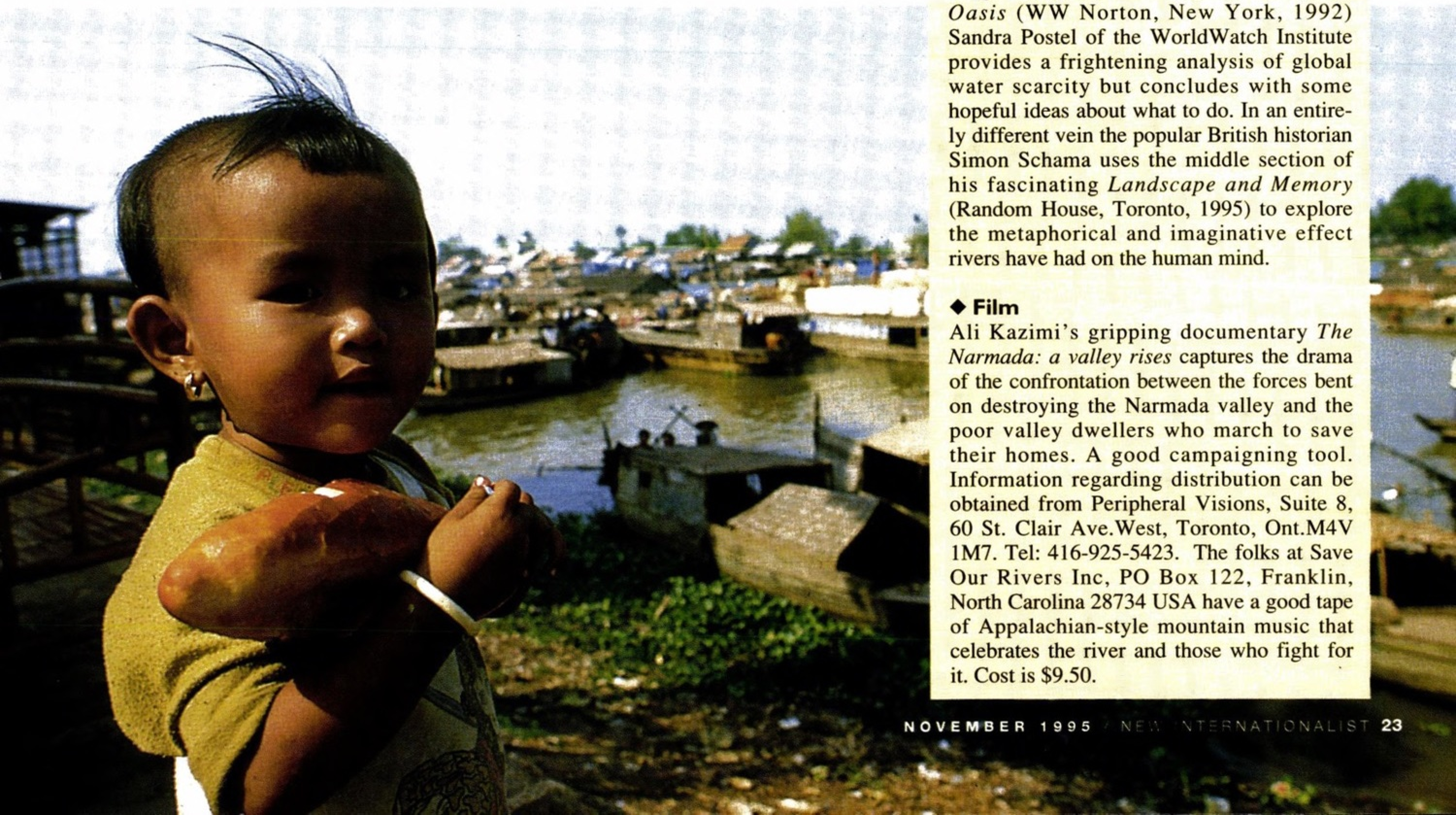
The single best source for keeping in touch with what is happening with the movement in defense of rivers is the International Rivers Network (see interview page 14) at 1857 Berkeley Way, Berkeley, California 94703 USA. They publish *World Rivers Review* ($35), the newsletter *BankCheck Quarterly* ($25) about the World Bank and *Riverworks*, a directory of organizations worldwide who work on river issues ($15) as well as occasional papers and much else. Two other important organizations are the Bangkok-based Towards Ecological Recovery and Region Alliances (TERRA) 409 Pracharatbampen Rd, Huay Kwang, Bangkok 10310, Thailand, who published the book *The Mekong Currency,* and Canadian-based Probe International (225 Brunswick Ave Toronto Ont. M5S 2M6) who keep a close watch on boondoggle projects and those behind them.

◆ Books

There are several excellent books on hydraulic society and its discontents. One very amusing account is Mark Reisner's *Cadillac Desert* (Sierra Club Books, San Francisco, 1993). Reisner takes apart the short-sighted mythologies that underpin river engineering in the American West and looks at its looming water crisis. Donald Worster tackles the same subject with a slightly more theoretical and broader sweep in his classic *Rivers of Empire* (Oxford University Press, New York, 1985). In *The Dammed* (Bodley Head, London, 1994) Fred Pearce provides perceptive journalism about the global reach of river engineering. In *Last Oasis* (WW Norton, New York, 1992) Sandra Postel of the WorldWatch Institute provides a frightening analysis of global water scarcity but concludes with some hopeful ideas about what to do. In an entirely different vein the popular British historian Simon Schama uses the middle section of his fascinating *Landscape and Memory* (Random House, Toronto, 1995) to explore the metaphorical and imaginative effect rivers have had on the human mind.

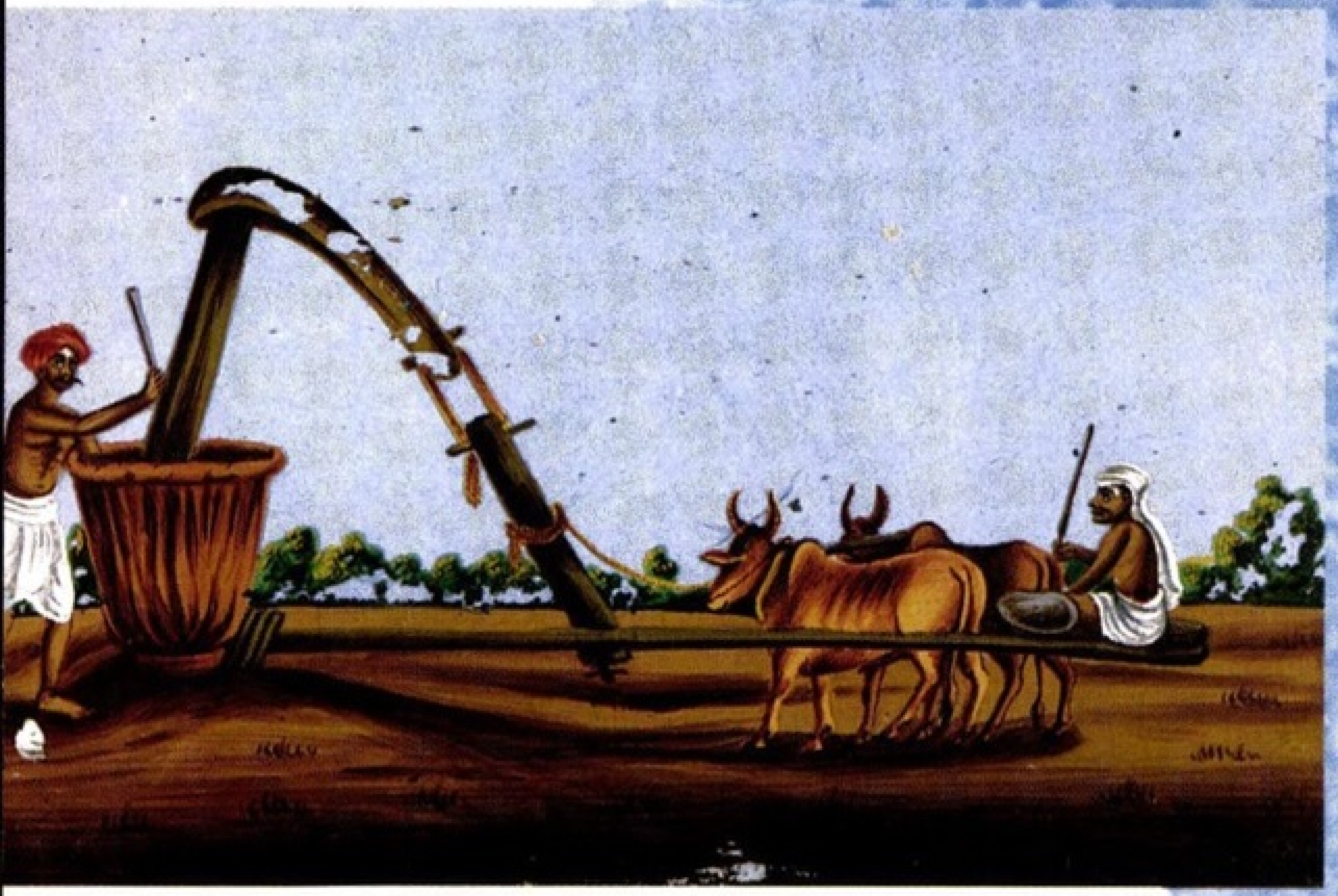
◆ Film

Ali Kazimi's gripping documentary *The Narmada: a valley rises* captures the drama of the confrontation between the forces bent on destroying the Narmada valley and the poor valley dwellers who march to save their homes. A good campaigning tool. Information regarding distribution can be obtained from Peripheral Visions, Suite 8, 60 St. Clair Ave.West, Toronto, Ont.M4V 1M7. Tel: 416-925-5423. The folks at Save Our Rivers Inc, PO Box 122, Franklin, North Carolina 28734 USA have a good tape of Appalachian-style mountain music that celebrates the river and those who fight for it. Cost is $9.50.



Kings of the water

River water has been critical to the making of human history. This is especially true for the people who have lived in deserts since the dawn of human civilization. Some of the most elaborate works of river engineering and the social structures needed to support them have been established to maintain life under hostile dryland conditions. NI traces the promise and the pitfalls of hydraulic societies both ancient and modern.



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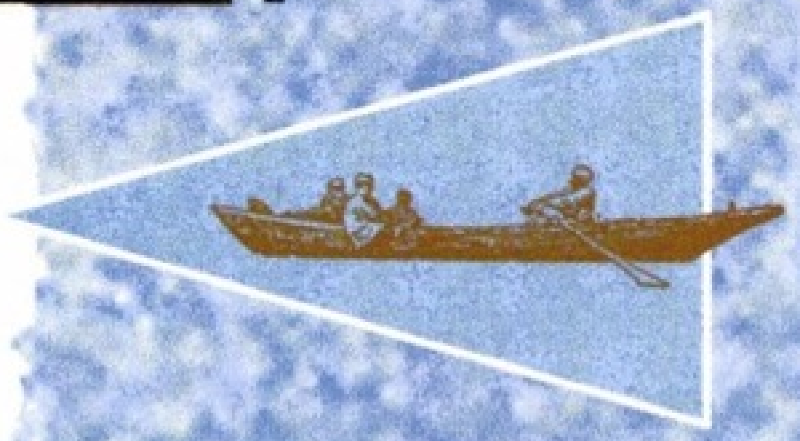
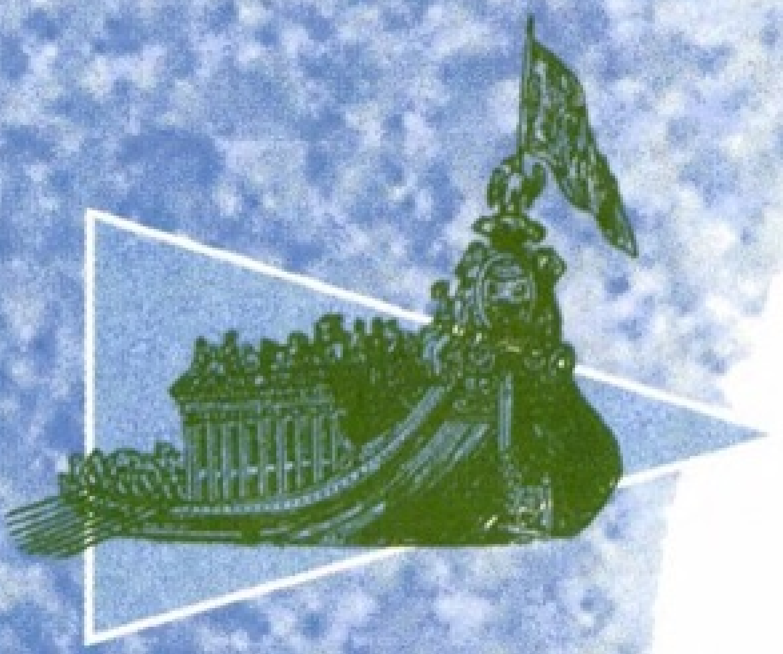
Subsistence Agriculture

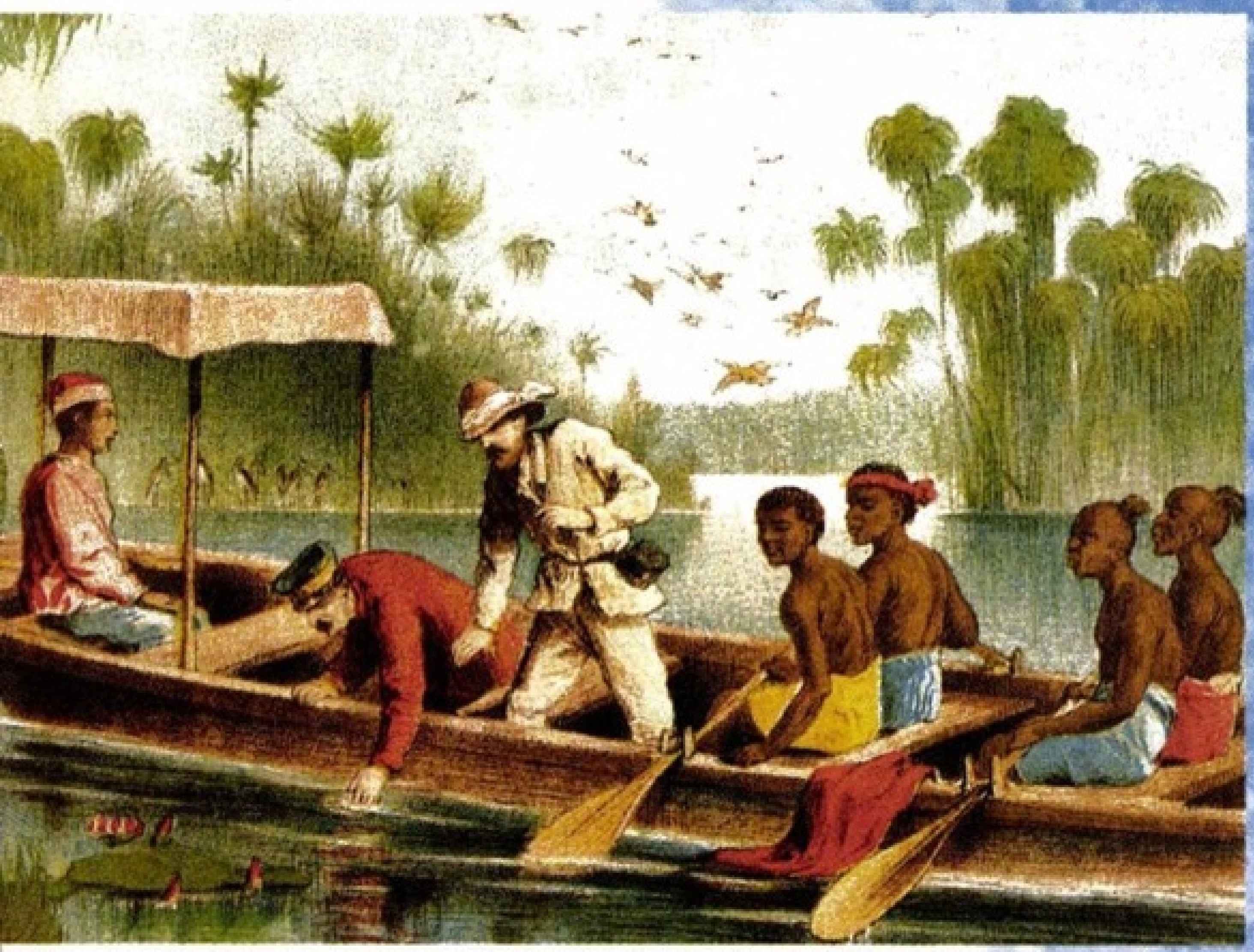


Irrigation is almost as old as agriculture itself. It was practised on a small scale to grow food for local consumption (and even surplus). Elaborate canal systems to water the crops of the Papago or `bean people' allowed these native Americans to survive some of the harshest conditions of the Sonoran desert. Intricate systems of small reservoirs or *qanats* and spring tunnels were used to capture precious run-off in a belt stretching from Palestine to Iran. The lighter the touch in dealing with delicate dryland eco-systems the better the chance of avoiding waterlogging or salt-poisoning of fertile topsoils. Today such locally-controlled irrigation is still in operation from the rice fields of Bali to the 100,000-odd irrigation co-operatives that dot the Japanese countryside.

Oriental Despotism



Larger-scale irrigation systems are intergrally tied to the development of the absolutist state that came to dominate small villages in the valleys of major rivers from the Tigres-Euphrates to the Yangtze and Yellow rivers of China. The state itself arose in the drylands of the Middle East where it co-ordinated the major works of irrigation and water control. The trade-off was simple: dependable water supply and relative safety from floods for tribute, labour and obedience. Huge armies of labourers had to be mobilized first to build and then to maintain elaborate systems of dikes and irrigation canals. The Nilometer (below) measured the Nile's crucial flood – 16 cubits was ideal. Religions of sacrifice and the worship of river gods – Isis and Hapi on the Nile, Ninurta in Mesopotamia and Ganga in ancient India – were part of the cosmology of a ruling priesthood. The bending of rivers to human will occurred at the same time as bending the will of the many to the dictates of the few. Today most of their great water works lie in ruins.



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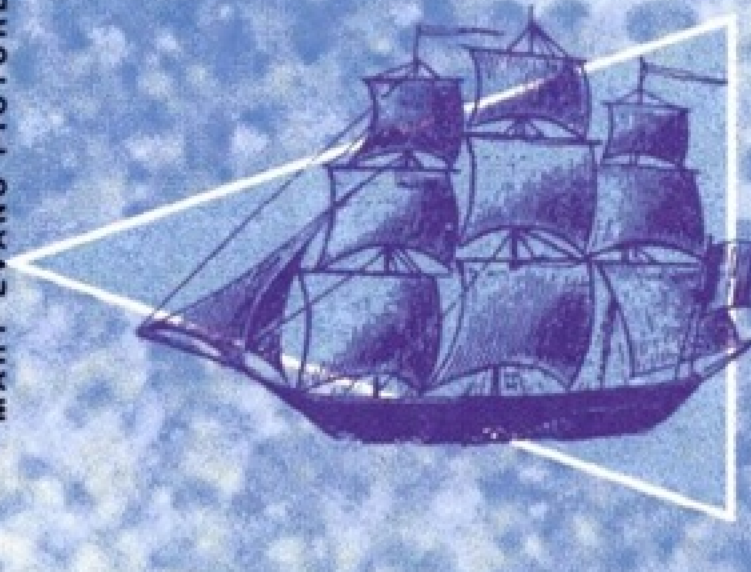
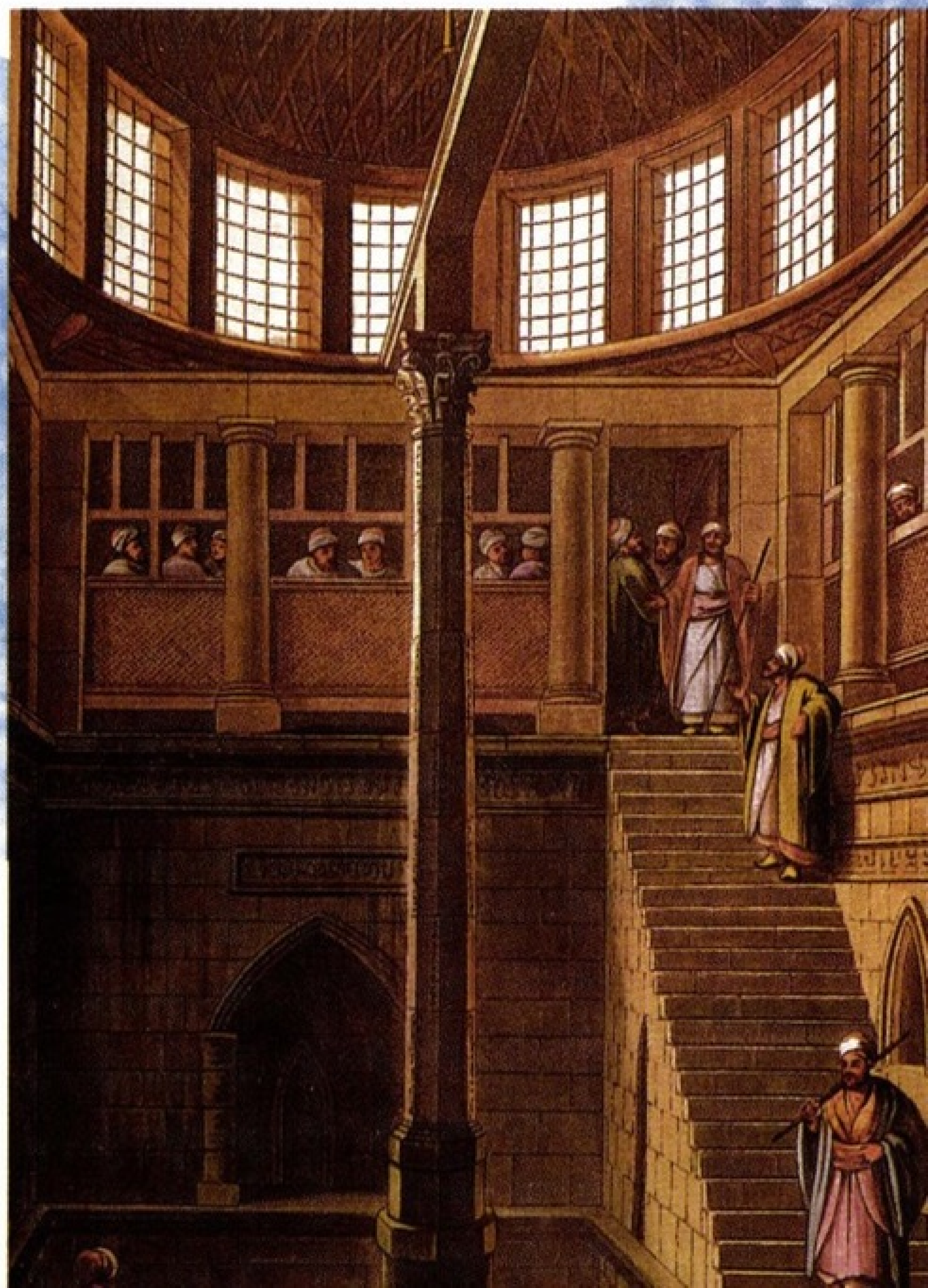


The Mystical Source

For the European culture of the Renaissance and the Enlightenment the sources of the world's great rivers took on a symbolic and metaphoric importance. The source of the Nile in particular became associated with everything from the Garden of Eden and the Horn of Plenty to the nourishment of political liberty. The fountains of Bernini made use of ornamental water hydraulics that were later to shape modern engineering and featured classical figures of crouched or reclining (but always well-muscled) river gods of four continents. Early European explorers such as Sir Walter Raleigh were obsessed by the idea that rivers of the New World (such as the Orinoco) would lead them to the gold of an elusive El Dorado. In later literature writers like Joseph Conrad used the river as inspiration to explore the journey into the human psyche.



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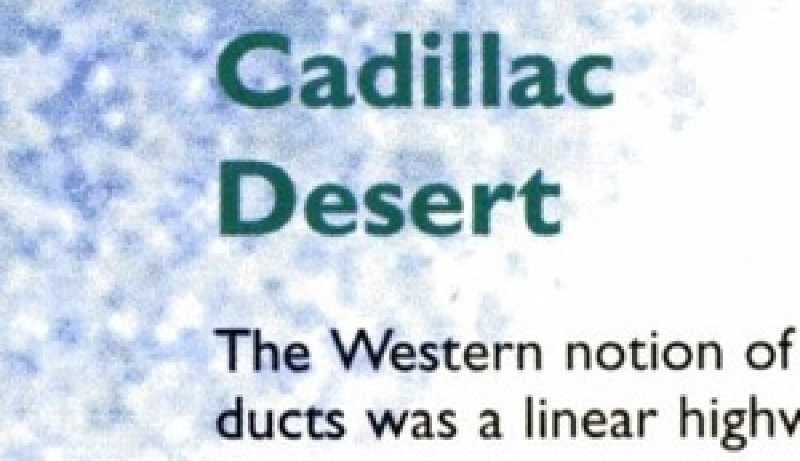
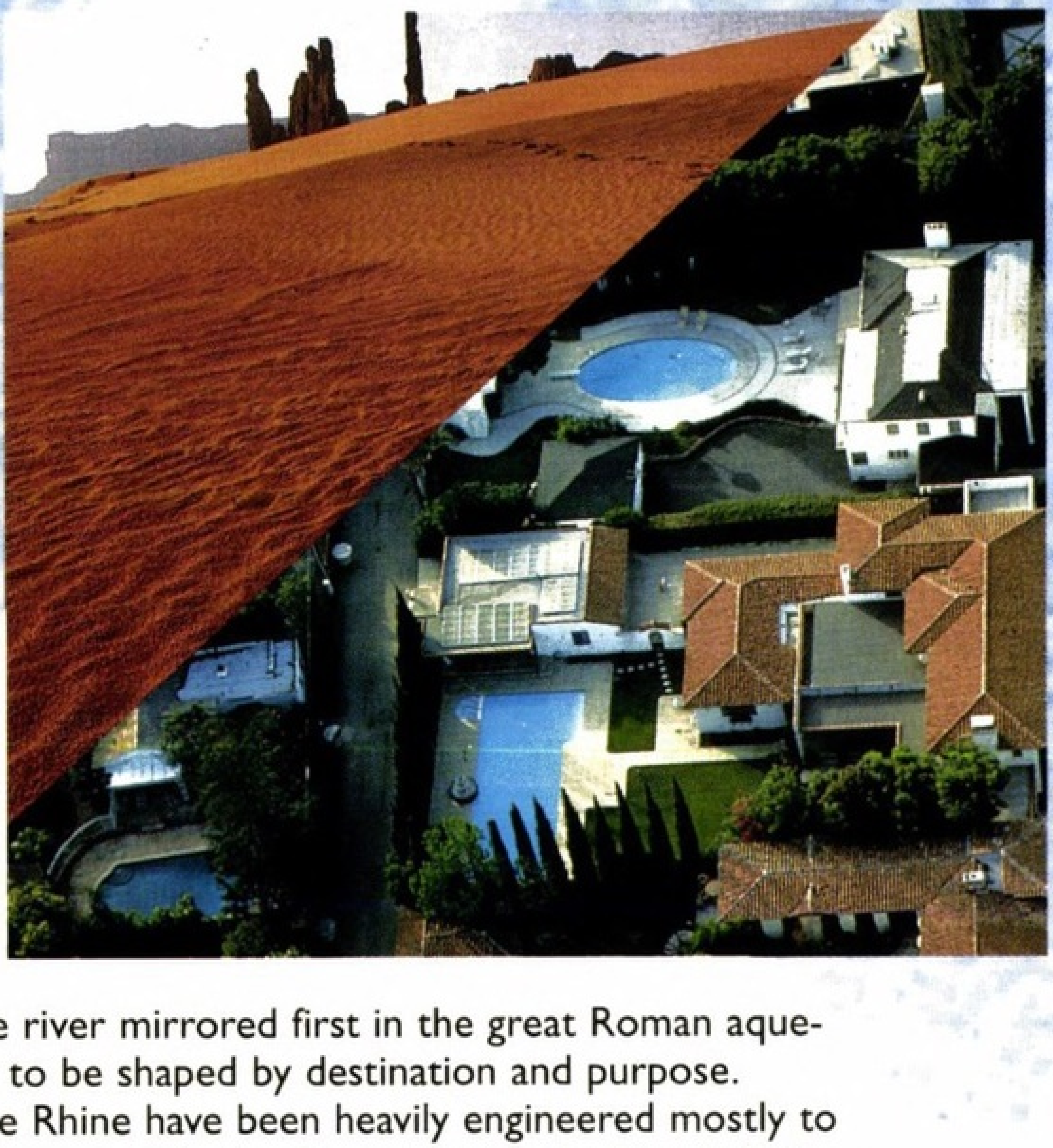
DU HAUT BARRAGE
HIGH
DAM
POWER
STATION

ROBERT HARDING

Dams for Development

This model of a prosperous US West has bewitched modernizers around the world and led to an era of large dam construction starting in the early 1960s. Generally dam-building and large irrigation projects came to be seen as progressive steps in the march to independence. The High Aswan Dam across the Nile (entrance pictured above) completed in 1964 with Soviet help, was a symbol of Third World independence from neo-colonial control. Since then the Volta, the Zambesi, the Ganges, the Indas, the Paranai are just a few of the great rivers of the Third World breached to supply dependable water for irrigation and the voltage necessary to jolt an industrial take-off. A powerful consortium of nationalist politicians, multilateral lenders and transnational engineering and construction firms have reshaped river eco-systems as a vital part of industrial infrastructure. Advantages and wealth for some came right away, except to those uprooted from their homes (four million at last count), costs have been slower to accumulate. The curse of salted and waterlogged fields, coastal erosion, ruined fisheries, staggering debt, and escalating repair bills are just now beginning to hit home.





MICHAEL HOWELL / ROBERT HARDING

RENNI BURRI / MAGNUM

Cadillac Desert

The Western notion of the river mirrored first in the great Roman aqueducts was a linear highway to be shaped by destination and purpose. European rivers such as the Rhine have been heavily engineered mostly to accommodate shipping. But modern hydraulic society reached its highest expression in the American West. Here a vast wilderness was flooded with settlers looking for the promised land and finding mostly arid and semi-arid desert. Many went to the wall before billion-dollar investments in water infrastructure made the desert bloom. The Mormons led the way with a rigid theocracy directing the irrigation of Utah. By the 1930s the construction of the Hoover Dam on the wayward Colorado River initiated the era of the mega-dam. Today California's Imperial Valley, one of the world's great food-producing regions, and thirsty and energy-hungry desert metropolises such as Los Angeles, Phoenix and Las Vegas are lavish testimony to the taming of the Colorado, Columbia and myriad other Western rivers.

Respecting the River

Dam sites these days are usually surrounded by barbed wire and armed guards. With good reason. The movement to resist river engineering has gained real momentum in the last decade. In the industrial North dams are becoming almost as controversial as nuclear power plants. Costs and environmental impacts undergo minute scrutiny. The number of new dams has fallen dramatically. In the South resistance has proved more difficult with 'resettled' farmers and green activists getting blows from police truncheons rather than seats at assessment hearings. Still some notable victories have been achieved – a number of dams have been stopped in Thailand, the corruption-ridden Bangladesh Flood Action Plan has been scaled back dramatically and the World Bank has been forced to withdraw from several mega-dam projects on the Indian sub-continent. And the movement is putting alternatives on the agenda – energy development that works with a river rather than trying to reshape and conquer it. Traditional small-scale methods of irrigation are also being revived, from Karez in Western China (small-scale water catchment) to the stone lines used in arid Sahelian Africa and the rebuilding of age-old raised fields to aid drainage by the Quechua Indian farmers near Lake Titicaca in Peru.

RIO BRANCO / MAGNUM

Ping Ping and the Grannnd Projeccct

Mo Lu's story of how the kids saved the river.

Ping Ping had a strange dream that troubled her. It all started sweetly. She was joy-riding on a huge plum-pit along the river by the village. The plum came from her parents' orchard. It was fun and laughter in the beginning. But when she sailed round the corner, the river suddenly disappeared. A great silence rang in her ears for the river's music was gone. The plum-pit lay flat on the river bed, with dead fish, shrimp, crabs and weeds around. Ping Ping woke up, sweating all over.

For six-year-old Ping Ping, this river is a great friend to her, for no-one is as patient of her stories, worries and secret wishes. She also knows that the river is a great friend to the villagers for it waters their fields and orchards, washes their clothes and fills their pots and bottles. Ping Ping told everyone the river was her best friend although she knew it had a bad temper sometimes. Then the water-flow would run like wild animals. But mostly as people in the village said, 'it gives us our fill'.

The next morning she went down as usual to have her morning chat with the river. She had come, of course, to tell her friend of the troubling dream. When she had finished, a voice rang: 'That troubles me too.'

Ping Ping was startled, for she never expected the river could really talk to her, except as an echo in her heart. To make sure, she said: 'That troubles you too?' 'Yes.' The voice came from behind her. She turned and found an old man whom she had never seen before. The old man said he was her grandpa.

'You must be joking. My grandpa is dead.'

'Oh I mean I am your grandpa's grandpa's so many grandpa.'

Ping Ping listened and counted her fingers. 'Then you must be dead many times.'

Oh hoh hoh, you are right, I am dead ... eh... let me see,' now the old man counted his fingers, 'I am dead about twenty times.'

They both laughed heartily. Ping Ping took a liking to the old man immediately. After all you don't always meet someone who's died so many times, and is so nice. They chatted and soon Ping Ping called him 'Old Grand Old.'

'So you are Old Grand Old! Father said that the first ever who lived here is old grand old.' She was really excited.

'Yes I am old grand old!' the old man said calmly, and looked kindly into Ping Ping's eyes.

'Then why didn't I see you before, old grand old?'

'It's because if I don't talk to you, you won't be able to see me. I belong to the world of silence.'

Ping Ping thought it's a good trick to learn but she was still puzzled. 'Why did you talk to me now?'

'Something that troubles you also troubles me.'

'The river?'

'Yes, some people want to take the river away. Some spoiled... kids.'

'Oh, these must be the spoiled kids!' Ping Ping thought to herself when, in the afternoon, she sat near the village hall and watched four men working on a wall painting. They were not actually working. They ate and drank, they shouted at each other, they fooled around with the paint, spilling it all over. There were only a few patches of blue on the wall while the floor and their clothes and faces were messed with the spillings and drippings. 'Spoiled... kids!' Ping Ping thought to herself once more.

And she was right. That same evening the four gathered the villagers in the village hall to make an important announcement. Their manner was no better than in the afternoon. Now Ping Ping knew that they were officials from the city. When all the villagers arrived, the oldest of the men started to talk. He made a long speech...

'Eh.. Mmmm... Ahhh... GRAAAANNND DPPROOJE..... CT.. OURLEADERS......Ye hyehyeh.... big...... bath TUB..... RESERVOIR HA HA... century......... FLOOD stop PARTYLEADERSPARTYLEADERS...'

... that sent everyone to sleep. But when the fate of the river was mentioned, everyone was awake. The long and short of the story was that, to prevent flooding, the river had to be taken away. The river's water would be stored in a huge reservoir. 'In order to build this reservoir,' now, all excited, the four men came up to the forefront of the platform in a performance style. Then they spoke faster and faster, they pointed and moved wilder and wilder, all in unison...

'The mountain to the north had to go, CHOMP!'

'The curve to the east has to be straightened, hoh ha ha!'

'The cliff to the west has to go, BOOM,' and many more....

Ping Ping looked at them and was very sad. But worse was yet to come. The spoiled kids, shouting at a high pitch, suddenly came to a stop and turned to the villagers and said in a heavy tone, word by word: 'This has to go too. The village has to go too!'

The villagers whispered in each other's ears. But they couldn't ask some spoiled kids to make sense when some funny idea had popped into their heads, particularly when they had powerful fathers behind them.

Ping Ping could not sleep that night, neither could the villagers. While deep in thought, she began to feel a quiet commotion happening. Footsteps, suppressed noises, creaking doors and drawers, scratching rooftops. She was curious so she went to the drawers to get a candle. You can imagine her surprise when she found a wild rabbit there. When she looked around the room there were all sorts of wild animals, insects and birds. In the cow shed, in the pig sty, she found boars, boas and field mice. There were foxes and wild dogs in the trees, squirrels on the roofs. And the odd thing was all these animals were living in peace with one another.

Ping Ping met her father in the chicken coop when she went to check.

Father told her that the animals felt the danger and so they ran away. Last time, before the big flood, they ran like that too. And thanks to them, we were well prepared. But there was some difference this time, they came to us instead of going up to the mountain. They knew that it was human mischief and they hoped we could put a stop to it.

The next morning, Ping Ping met Old Grand Old by the river. He knew of the animal exodus already. Actually they could even see some of the animals on treetops and rooftops from the river.

'What a wonderful sight! When did you last see humans and animals living so peacefully together?' Old Grand Old exclaimed.

'But I think that they'd rather stay home in the woods.'

'They have no choice, my little grand.'

'But we have!' Ping Ping didn't know what she really meant. But Old Grand Old's eyes sparkled.

'Like what?' he asked gently.

'Like we know, they don't have to build that big bath tub... that reservoir, right?' She paused to look at Old Grand Old.

'Right.'

'.... because Pap said we had our ways to prepare for the flood, like, the animals would warn us. And the river, she can tell us, too, when she will become naughty. I surely can hear that. Papa said if we listen hard enough, we can hear her mood.'

'I wish those spoiled kids would listen to you, but they are now too busy playing with their model. Some people never learn until they suffer from their own mistakes.'

'But that would be too late. By then, the river would be gone, we would have left this village...'

'I hope before they get to make that big mistake, smaller mistakes can teach them to think better.'

'Oh, I'm sure they make mistakes. Last night when they pointed to where to build what and what had to go, they pointed to all the wrong directions. If the reservoir was to be built that way, it would be an upside-down one.'

'That's our chance,' Old Grand Old whispered to Ping Ping in her ear and she left with a smile on her face.

The next two weeks the four officials were very busy, and so were all the kids in the village. The officials were busy with the mural. It was a picture of the reservoir. The kids worked hard to pickle vegetables and fruits, dry meat and fish and make salty fish in order to preserve them. The older kids

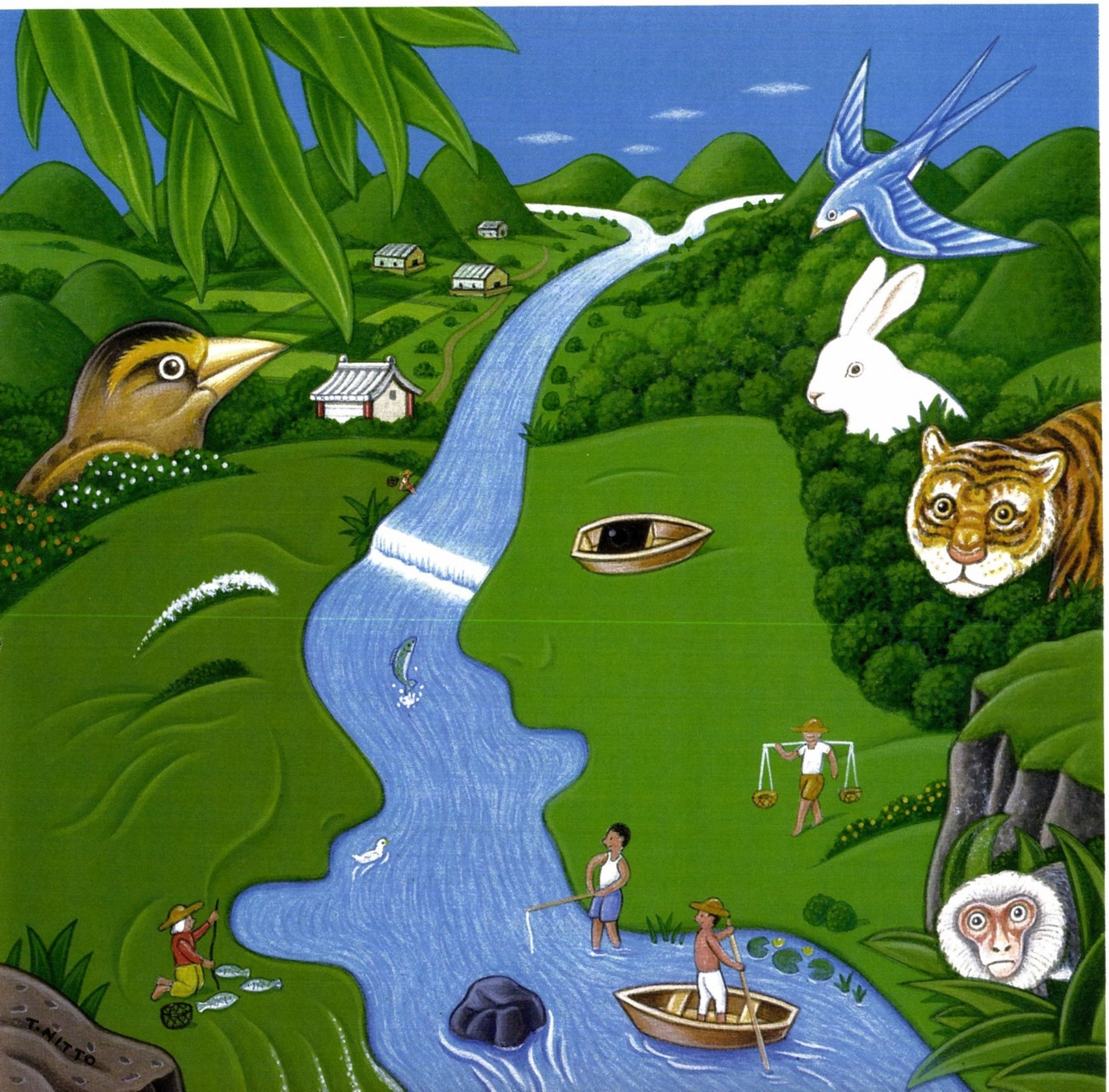
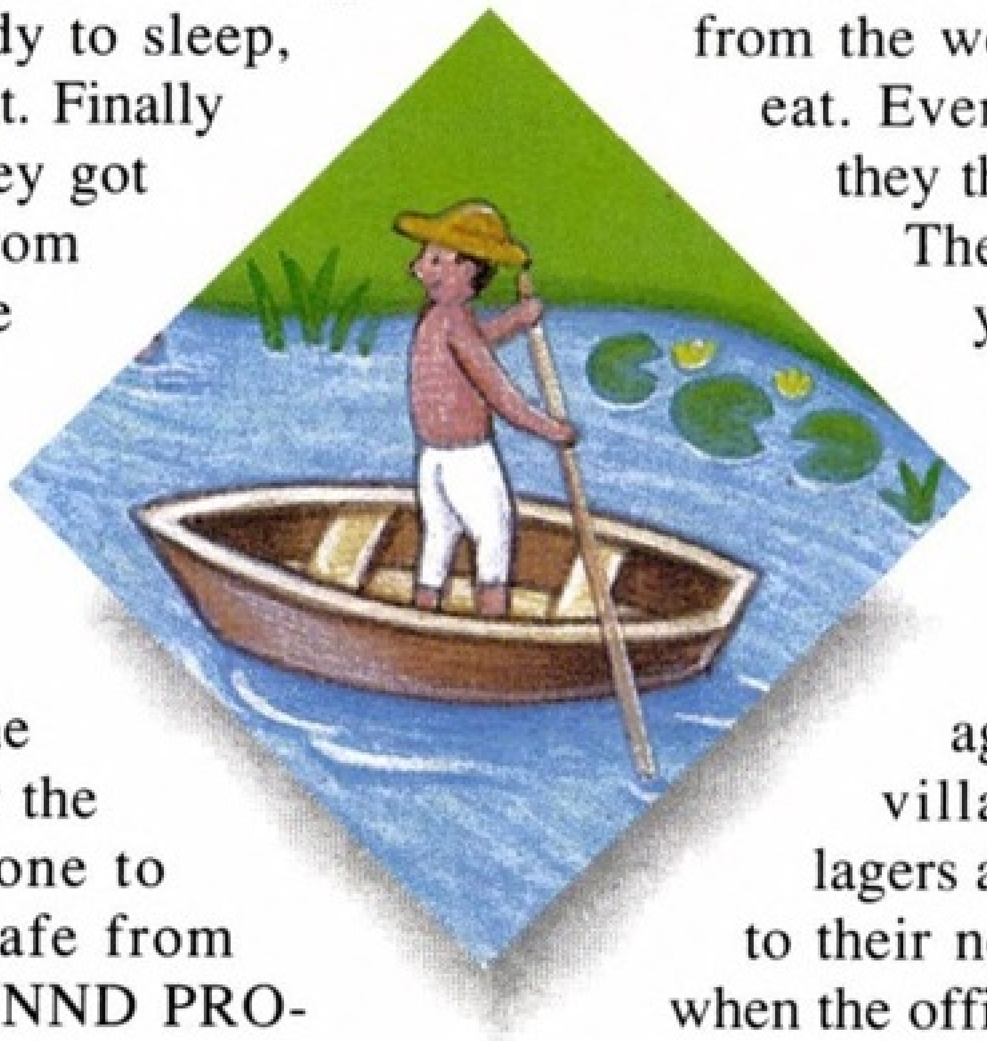


ILLUSTRATION: TOMIO NITTO

repaired their huts and made special arrangements. At the end of the two weeks the officials gathered the villagers in front of their big mural. The colour blue covered almost the whole wall, as if that were the only way to say how grand the reservoir was. From a distance it looked not too bad. But when the kids got closer, they could see holes here, cracks there that the paint didn't cover. It was like an unfinished project. They had made the mistake of thinking that it would be better big than free of faults. If only they knew what was going to happen.



Again when the villagers gathered the oldest official started to make a long speech that put everybody to sleep, this time in broad daylight. Finally it came to the mural. They got excited again and ran from one end of the wall to the other to tell the villagers which end was what, naturally in all the wrong directions. At last, they concluded the villagers should praise the Party and the leaders for the great deeds they had done to them. They would be safe from floods when this GRANNND PROJECCCCT was completed.

'No,'a small but clear voice came from the silent crowd. It was Ping Ping. 'You chopped off the mountain in the wrong place, water will spill from there.' She was pointing at spots on the mural while speaking.

The officials looked at her with unbelieving eyes, looked at the mural, then at one another. They were about to say something, but before they could, voices followed on each other: 'The dam up there is far too low, oh hoh, when it rains.'...'There are holes everywhere, I've never seen people so careless.' As the children spoke their minds, the villagers nodded in agreement. They whispered with one another, then began speaking out to the officials.

The four officials were stunned. They had never been challenged, especially not by kids. They had no words to say. Embarrassment turned to anger. Then they started shouting.

'You stupid......... knownothing....... good for you...................

GRANPROJECT.......... safe......... should praise........ THE PARTY....'

As they were shouting they hit harder and harder with a stick pointer at the mural, as if to make their point stronger. The children smiled. What they expected was happening. Water began to seep through the holes and cracks, over the top of the painted dams. At first it was almost unnoticeable. Then it was like turned on taps. The villagers looked at the strange sight with wide-open eyes. Before they could ask, their children took their hands and ran into their houses which at this point turned to junks.

The officials were the last to realize what had happened. Now water was pouring out from the painted reservoir. They had to run for their lives. But their house was not a junk and they had to climb to the roof and shout for help as the water level rose every minute. Ping Ping threw them a sampan and hooked it to her junk. They climbed in and were safe now, though they couldn't move about too much and they didn't have a roof above.

The flood lasted a week. It was a flood that the villagers didn't object to for it brought them hope. They had a good rest with their children and all the animals from the wood. They had enough to eat. Every time they had a meal, they threw some to the officials. The kids would say: 'Enjoy your meal and your GRANND PROJECCC-CCT!'

When the water finally receded, the junks became houses again. The animals bid the villagers farewell. The villagers and the children went back to their normal life. Nobody knew when the officials left the village. They were too embarrassed to be seen. Nobody knew if the officials had changed their minds. But there was hope.

Early next morning Ping Ping ran down to the river to meet Old Grand Old. He was already there. She told him what life was like during the flood. They both laughed when she talked about the officials cramming on the sampan. Then after a moment's silence, he said in a low voice: 'Ping Ping, my Little Grand, it is time for me to go. I have to go back into silence, and you can't see me anymore.'

'But why do you have to go? We are friends now. Aren't we?' Ping Ping asked sadly.

'Yes, of course, we are. Still I've to go. I belong to the world of silence. But you can always talk to me, I am always around.'

'How can I talk to you if I don't see you?'

'Oh, yes, you can. You can talk to the river and I can hear you. And you can hear me too if you listen hard enough. I am sure you will.'

Ping Ping was sad, but she knew she had to trust Old Grand Old. A last long hug, Old Grand Old slowly walked away. He turned around in the distance and said: 'When I was small like you, I made a promise to the river. I wanted to be her friend, always. I kept the promise.'

Ping Ping lightened up. She thought for a moment and made the same promise to the river. ■

Mo Lu is the pseudonym of a teller of Chinese children's stories and a Child of the Sixties.

Dam-

Fred Pearce thinks that activism and science are coming together in the South's struggle to defend water against concrete.

THE GORGORAM fishing festival in northern Nigeria, on the fringes of the Sahara, was once a celebration of the miraculous fecundity of even the most inhospitable environment. Gorgoram is in the middle of the Hadejia-Nguru wetland, a giant splash of green in near-desert, in the floodplain of two rivers. Every year, in mid-February, thousands of people gather to collect the last fish from the rivers.

But they all say the festival is not what it was. Catches are well down. The rivers no longer fill with water. And round the village there are other signs of desiccation in a once-green landscape. Hundreds of trees have simply fallen down because the water table has slipped beneath their roots. Local lakes, through which boys still herd their cattle, now dry up weeks earlier than they used to. And floods no longer reach the fields of fertile soils, known as *fadamas*, which they once irrigated.

Ask the people, and few know why the change has come. But at the offices of the Hadejia-Nguru Wetlands Conservation Project – set up a decade ago by the Nigerian Conservation Foundation – they know all too well. The wetland, a vital resource for tens of thousands of people, is dying because upstream the Government is damming and diverting the water for irrigation and to fill taps in Kano – the capital of northern Nigeria.

The conservationists have contacts with dozens of villages and nomadic cattle herders on the wetland. They help with the management of scarce water – a small dike here, a new fishing boat there, some seeds for a new orchard. But they know that they are fighting against the tide. Three major dams have already been built. And now the German firm Julius Berger is at work again, on the largest dam of all, at Kafin Zaki.

These projects have been undertaken in the name of 'greening' the desert margins.

busters!

Shock troops of the anti-dam movement: the people of India's Narmada valley say 'no' to the giant Sardar Sarovar project.

TODD NACHOWITZ / IRN

But according to Mahtari Aminu-Kano, director of the Project, the dams have cut flooded wetland area in half. There is less water for fisheries, for forestry, agriculture, cattle herding and drinking.

The water table has fallen by 25 metres in places, and wells have dried up for hundreds of kilometres downstream. Far from halting desertification, the dams are promoting it. Hydrological research for the project has found that, for every hectare of fields irrigated at the Kano irrigation project, two more dry out on the wetland.

All may not be lost. The dams could be made to operate more sustainably, says Aminu-Kano, by releasing water into the wetland in time to irrigate crops and maintain fisheries. The Project is making headway with local officials to encourage management of the projects for all the people – not just those lucky enough to have a plot on a Government irrigation scheme. But in a country where corruption is rife and respect for democracy minimal, they are lone voices.

Nigeria is not the only country to have an irrational love affair with dams. It has been a worldwide phenomenon. For more than a generation, from the 1950s to the 1980s, large dams were seen as a symbol of political independence and economic development. For Egypt's Aswan Dam, which harnessed the Nile floods, or Ghana's Akosombo Dam, which flooded an area of the country the size of Lebanon, they amounted to a fundamental remaking of the geography of the country. India's first Prime Minister Jawaharlal Nehru called his dams 'the new temples of India'. For 50 years the World Bank has spent more money on dams than anything else.

And yet today the tide of opposition to these symbols of modernism is in full flood. Opposition to dams has developed into an assault on all manner of river engineering schemes, such as canalizing river channels and draining their floodplains.

The most potent movement to date has been against a string of dams on one of India's largest and most holy rivers, the Narmada. The declared aim of the dam is to provide water for irrigation in the desert region of Gujarat state. But, if completed, it will create a reservoir 500 kilometres long and drown the homes of an estimated 90,000 people.

The campaign has employed the Gandhian principles of village-based activism and personal sacrifice. Twice in recent years villagers closest to the dam have refused to leave their homes as the first flood waters lapped at their doors. Only police intervention to remove them has so far prevented them drowning as waters rise during summer monsoons. Throughout 1995 constant rallies, hunger strikes and other actions by local activists like the charismatic Medha Patkar and the community-based group Narmada Bachao Andolan, plus a Supreme Court case demanding an independent cost-benefit analysis of the project, have all but brought dam construction to a halt.

It is the abuse of the land rights of village people and farmers even more than environmental considerations that fuels opposition to dams in India. Already some 16 million people have been evicted to make way for the largest number of dams in any country outside the US. Almost every state in the country has its dam dispute. But aside from the Narmada, the only one to hit international headlines is the Tehri dam in the north. There opposition mounts to plans for damming a tributary of another holy river, the Ganges.

The site of the 250-metre Tehri dam, which is intended to be India's largest, is within a few kilometres of the epicentre of a major earthquake in 1991, which killed several hundred people. According to both US and Russian earthquake geologists, its design is unsafe for the site. If it failed, a tidal wave of water would rush down the valley engulfing several towns.

For years, the anti-Tehri campaign has been masterminded by Sunderlal Bahuguna, a veteran of the Himalayan Chipko movement, famous for hugging trees in an effort to protect them from the axes of foresters. That battle was largely won when the Indian Government imposed a ban on deforestation in the region. Since 1991, Bahuguna has lived in a tin shack on the banks of the river Bhagirathi just upstream of the dam site. He swears that he will never move – come hell or, more likely, high waters.

In 1992, he forced a two-year suspension of construction after his well-publicized hunger strike brought Government promises to review the scheme. But promises were broken and in June 1995, with construction resumed, police arrested him during a second hunger strike. He was removed to hospital to prevent his apparently imminent death.

The prospects for a pan-Indian anti-dam movement appeared close after Medha Patkar from the Narmada protest rushed north from Narmada to be at his side, only to be arrested en route. Anti-Tehri campaigners too opposed the involvement of Patkar in their campaign. The respected science and environment magazine *Down to Earth*, edited by veteran journalist and campaigner, Anil Agarwal, accused the Tehri campaigners of destroying the anti-dam movement in India through factionalism. 'Clearly, the ego-system of Indian environmentalists is more fragile than the eco-system of the Himalayan ranges,' it commented acidly.

Despite such disputes, the model for successful action to save rivers from mega-dams remains passionate local activism backed up by the sophisticated media-manipulation of Western Green groups. Campaigners now increasingly believe that scientific orthodoxy is moving decisively in their favour. Most dams and other river-engineering projects are construction boondoggles that fail to deliver what they promise and cause huge damage to ecological systems and human livelihoods. Any sensible cost-benefit assessment would reveal that the losses to farmers, fisheries, villagers far outweigh the benefits of most dam projects.

Children of the Amazon; one of the joys of riverlife well worth defending.

BRUNO BARBEY / MAGNUM

This summer the World Bank finally heeded the complaints of international campaigners and local activists when it backed out of the Arun III dam project in Nepal. A year before the Bank's vice-president Joseph Wood had roundly declared that if the Bank dropped Arun III it would 'send a signal that the Bank can no longer support large infrastructure projects'. 'We hope that Mr Wood was right,' commented Gopal Siwakoti of the Arun Concerned Group in Nepal.

Western environmentalists once saw hydroelectric power as the ultimate 'green' renewable energy. But the tables are now turned. Opponents of dam-construction are chalking up regular victories in the North as well as the South. French campaigners, based at the town of Le Puy in the Massif Central, mobilized in the early 1990s to force their Government to abandon a plan to dam the headwaters of the River Loire – dubbed, a little fancifully, 'Europe's last wild river'.

Dams are no longer the campaigners' only targets. Flood barriers are an increasing source of anger to people living beside rivers. Just as water-supply dams often actually deprive the poorest of water, so many flood-protection measures create new flood perils.

The hydrological lesson is that rivers need to flood across their natural floodplain. Barricade them and they become more, not less, dangerous. In the past 150 years, German engineers have straightened the main branch of the Rhine by 130 kilometres and separated it from its floodplain. As a result spring rains and melting snow from the Alps rush to the sea in half the time that it once took, concentrating rather than dissipating flood surges in cities such as Cologne as well as the delta regions of the Netherlands.

German and Dutch activists from the World Wide Fund for Nature have for several years been arguing that the Rhine and its tributaries should be reconnected with its floodplain to encourage nature habitats and to reduce flood risks. When the river burst its banks early in 1995 they found the Dutch Environment Ministry backing them. The forced evacuation of 250,000 people prompted Ministry officials to call for less, not more, engineering. They blamed the floods on 'ill-advised efforts to contain rivers in their straitjackets by river-architects and dam-builders.'

The majority of the world's rivers are now engineered in some way by humans. The range of social and environmental side-effects of these vast experiments are only gradually becoming apparent. And as the story unravels it takes a new twist: it is the environmentalists who emerge on the side of science, while the engineers find themselves cast not only as anti-people but also as anti-scientific. ■

Fred Pearce is author of the book *The Dammed* and writes frequently for *New Scientist* magazine.

The NI Interview

Manuel Patarroyo

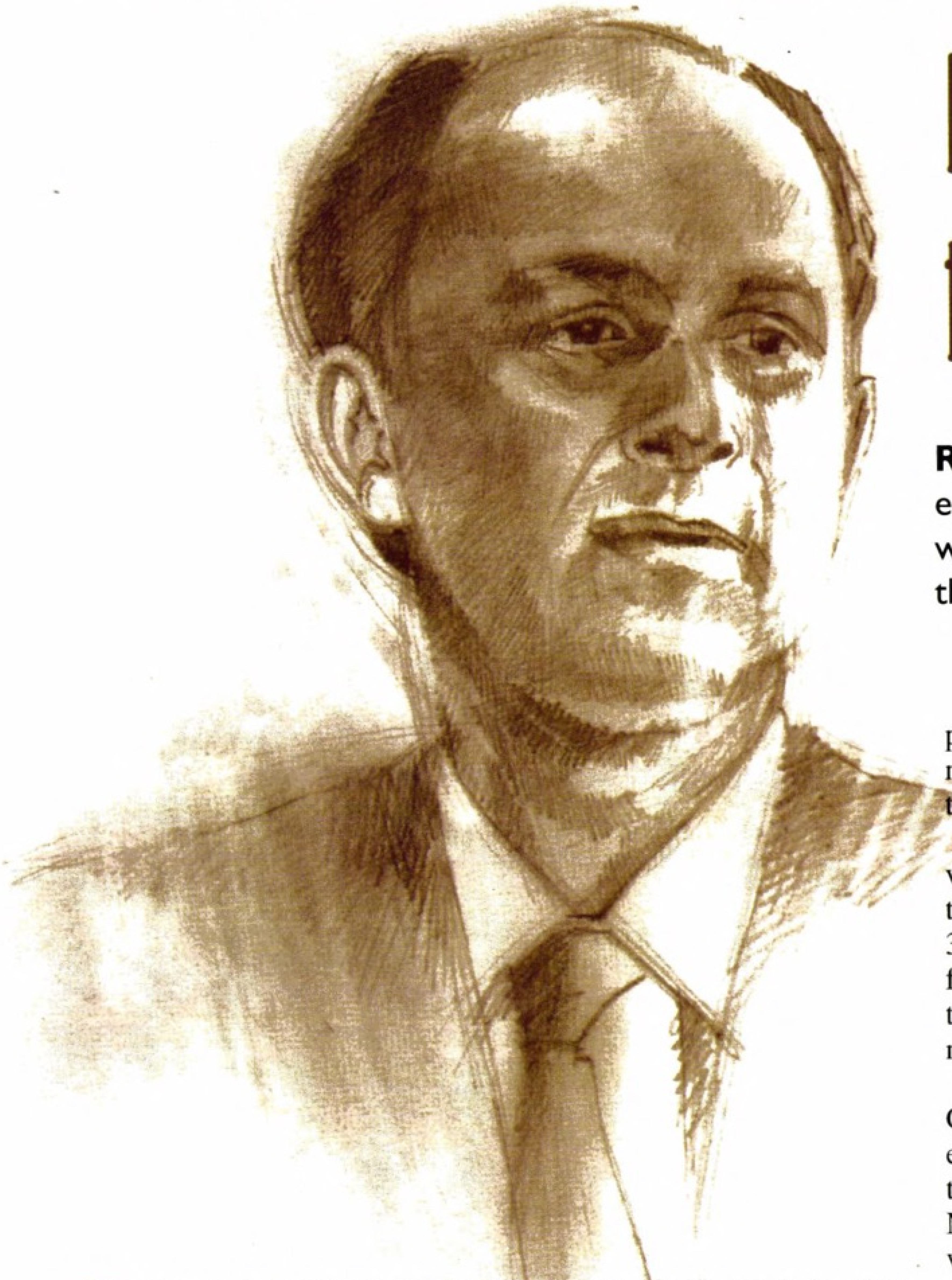


ILLUSTRATION: ALAN HUGHES

Richard Swift chats with a Third World research scientist who has discovered a new malaria vaccine and wants to make sure the benefits of his research reach those people who need it most.

CONFIDENCE IN THE BENEFICIAL EFFECTS of science is hard to come by these days. That is why Manuel Patarroyo is so refreshing. The Colombian research scientist's conversation is peppered with phrases like 'it's perfectly understandable' and 'it's very straightforward' as he tries to explain things that seem anything but.

He has a disarmingly casual style when dealing with complex questions of scientific method. But this style has a harder edge when he talks about the power of the Northern scientific establishment. Patarroyo claims that his work and the efforts of his Third World colleagues are often treated with a condescension bordering on racism by Northern scientists. He points out that it took his Bogota laboratory four years to develop the world's first safe and effective malaria vaccine, but six years to have it recognized. And while controversy lingers on there is now an increasing recognition that his new vaccine (the first against a parasite) could save over a million lives a year.

His explanation of the discovery seems simple enough: 'All previous vaccines [for other diseases] have been biological products. We tackled the problem in a completely different manner. We identified the molecules of the microbe or the parasite and reproduced in the chemical laboratory the same chemical structure the microbe produces in order to survive. This is what we inject. The body makes a defense against this natural structure and when the microbe arrive the body's defenses are already well-armed. That's the malaria vaccine.'

A typically clear explanation. But there is one problem. 'During the last 25 years,' says Patarroyo, 'pharmaceutical companies have invested, unsuccessfully, at least $500 million in trying to develop a malaria vaccine.' It's this heavy investment, he believes, that has fuelled the scepticism and often outright hostility that has greeted his discovery.

'Most of my detractors are people who get support from the pharmaceutical companies and the Western scientific establishment. Once you realize who your critics are and who is behind them then things begin to fall into place.'

So far tests appear to support Patarroyo's discovery: 'The vaccine has been proven effective between 31 and 60 per cent of the time to people over one year old. This means that with only 31 per cent effectiveness you could protect 100 million people from malaria. With a yearly death toll of more than three million this could save a million lives. No vaccine has ever protected so many people.'

Patarroyo's own research has been supported by the Colombian Government and his lab is renowned for its *esprit de corps* and egalitarian style of work. He believes that Third World science, though still in its infancy, is much more socially-oriented than its Northern counterpart. In the North, he says, 'there is a tremendous waste of money on absolutely irrelevant issues. In the developing world science has to be problem-oriented. Yet the tendency is to look to the North rather than the South for solutions.'

Rather than profit from his discovery Patarroyo stunned his critics by turning the patent for his vaccine over to the World Health Organisation (WHO) – for free. Why? 'Because millions of lives depend on it – the benefits should go to humankind, not to fill someone's pockets. We must realize that it we don't care for others and we continue our stupid ways of egoism and narcissism all of us are going to collapse – quickly, extremely quickly.'

During the last 25 years... pharmaceutical companies have invested, unsuccessfully, at least $500 million in trying to develop a malaria vaccine.

But even after turning the patent over to the WHO there were hurdles. The organization planned to produce the vaccine in Europe and that meant escalating costs. 'There were discussions with a major pharmaceutical company to manufacture the vaccine in Switzerland and that would have sent the price skyrocketing.' Sticking to his principles Patarroyo insisted that the vaccine be produced in Colombia. 'That way we can keep the price extremely low. People were saying the vaccine would cost $10 a dose; in our hands it will cost 40 cents.'

The big multinational drug companies may not invite Patarroyo to their conferences or cocktail parties but that doesn't seem to faze the feisty scientist. 'If I produced another vaccine I would do the same all over again.' In fact, pharmaceutical companies now say that developing vaccines can never be profitable, a claim that makes Patarroyo bristle. 'When you are producing billions of doses of vaccine even five cents means hundreds of millions of dollars. But it is not enough for them. These guys are always looking to make the highest profit from the smallest investment. That should not be the aim of institutions dedicated to public health.' ■

Reviews

music

Sister Drum

by **Dadawa** *(Warners 4509 99592 CD)*

CONSISTENT WITH THE POP industry's interest in detecting and appropriating the exotic, Dadawa falls into the same safe-ish category as Ofra Haza or Enya. It means that **Sister Drum** is probably heading for a big marketing push with plenty of 'cross-over potential'. But marketing and hi-tech studio procedures can hide a myriad of issues.

Foremost among these is whether the album should exist at all. Authentic Tibetan musicians have been forced into exile due to the Chinese invasion and continued occupation of their country. The creators of this album – which purports to be inspired by Tibetan culture and spirituality – are both Chinese. Singer Dadawa – real name Zhe Zheqin – is Canton-born, and composer He Xuntian is from Shanghai. To be fair, Xuntian has a long-standing interest in Tibetan music. In **Sister Drum** he blends awesome Tibetan horns and chanting, with Chinese language songs and Western synthesized washes of sound. The songs' lyrics are shot through with Tibetan themes and Buddhist mantras. 'Sky Burial', for example, addresses in poetic fashion the Tibetan custom of leaving bodies on mountainsides to be eaten by vultures. Despite what seems to be a genuine sympathy with Tibetan music on the parts of Dadawa and Xuntian, you cannot ignore the fact that since 1949 China has set out to destroy Tibetan culture and turn the country into just another part of China. One must assume that this record has somewhere along the way gained official sanction and so is also playing a part in the dilution of authentic Tibetan culture. Musical tourism is not unusual in global pop music. But when the culture appropriated is struggling for its own survival and its enemy is doing the appropriating, there are serious grounds for concern.

Politics ☆
Entertainment ☆☆ **LG**

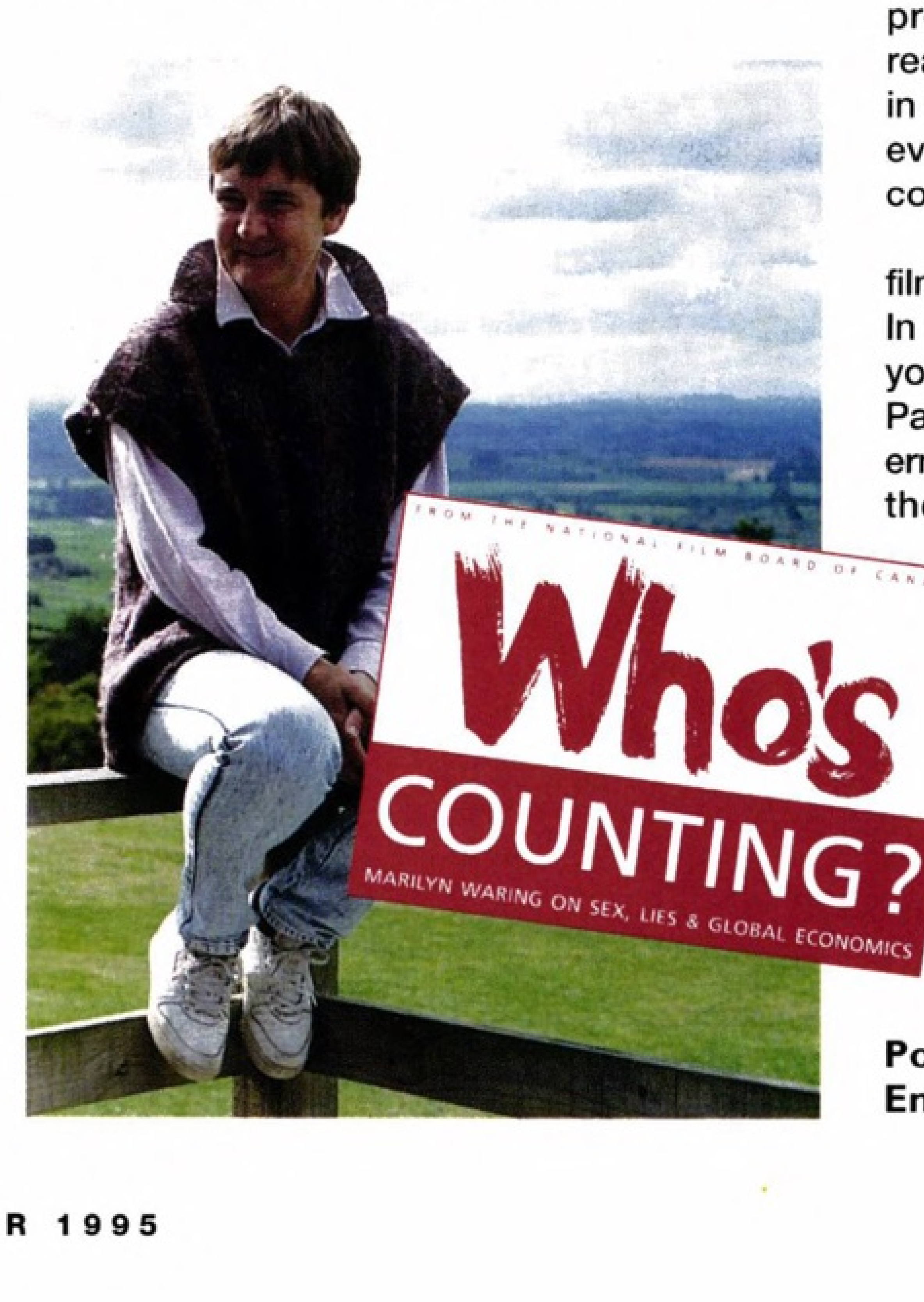
film

Who's Counting? Marilyn Waring on Sex, Lies and Global Economics

directed by **Terre Nash**

DIRECTOR TERRE NASH achieved notoriety when her film *If You Love This Planet* was denounced by the US Justice Department as political propaganda. Soon afterwards it won the 1983 Academy Award for 'Best Documentary Short'. Now Nash, along with the National Film Board of Canada's Women's Unit, Studio D, has produced another first-class documentary.

Who's Counting? is a bracing antidote to the brain-numbing jargon that spills from the business pages and the mouths of politicians. The film showcases the ideas of crusading feminist writer and economist Marilyn Waring. The Aotearoa/New Zealand activist is a feisty and acerbic critic of an international economic system which she says ignores and devalues any work which cannot be quantified. 'Economics,' she notes at one point in the film, 'is a tool of people in power and doesn't allow for the introduction of values that don't find their way into mathematical formulas'. No value is recognized other than money. She offers clear examples of current economic lunacies: the Exxon Valdez oil spill for example. By standard economic measurements this is one of the most successful environmental disasters of all time. The insurance costs, the costs of civil and legal proceedings, the cost of the clean-up operation, the compensation payments – all had dollar figures attached and so all boosted GNP and growth. The actual destruction of the environment, meanwhile, was economically invisible.


FROM THE NATIONAL FILM BOARD OF CANADA
Who's
COUNTING?
MARILYN WARING ON SEX, LIES & GLOBAL ECONOMICS

Modern economics, Waring argues, is an arcane and dangerous ritual practised mostly by men. She recounts with shock discovering that the UN System of National Accounts stipulates that 'subsistence production and consumption of their own produce by primary producers is of little or no importance'. This really refers to women's unpaid work. Women in rural Pakistan may work 16-18 hours a day every day of the week and yet their work is not counted as economic.

Waring herself is a formidable figure and the film captures her energy, humour and optimism. In 1975, at the age of 22, she was elected as the youngest ever woman MP in the New Zealand Parliament. In 1983 she resigned from the governing party, forcing an election that resulted in the island nation becoming the world's first nuclear-free country. Today she is a part-time goat-farmer, teacher and full-time crusader. On this score she and director Nash have much in common. 'As well as entertainment and intellectual stimulation I want **Who's Counting?** to be a tool for social change,' says Nash.

For more information contact the NFB, PO Box 6100, Station Centre-Ville, Montreal, Quebec, Canada H3C 3HS. Tel: (514) 283-9447 Fax (514) 283 5487.

Politics ☆☆☆☆☆
Entertainment ☆☆☆ **WE**

books

She Tries Her Tongue, Her Silence Softly Breaks

M Nourbese Philip
(The Women's Press ISBN 0 7043 4375 4)

THIS SLIM VOLUME CONCEALS an enterprise of epic proportions. Caribbean-born poet M Nourbese Philip has undertaken the difficult post-colonial dialogue with English, the conquering language, 'a foreign anguish'. The challenge is colossal – to weave between the poles of 'standard' language and dialect, exposing the history of inevitable oppression when a new world is grafted upon an unwilling people by means of an alien tongue. Then there are the hierarchies of gender and capital which are ingrained in language. Philip asks, 'in my mother's mouth shall I use the father's tongue?'

Readers familiar with post-modern writers writing about writing may be aware of some of the pitfalls – a tendency towards portentousness and unnecessary complexity which can alienate rather than entrance the reader. Some such problems are evident in this collection too; at times the verse labours a point or ends up sounding grandiose. But eventually the fierce intelligence that Philip brings to her themes wins out, and, surprisingly, the sections of the poem that are riddled with quotations and references to other works are the most fun.

This may be due to the refreshing way in which the sequence is put together, the smaller units playing off ideas against each other, the whole blessed with the enlivening improvisatory feel of jazz.

In her 'Afterword', M Nourbese Philip states that: 'The havoc that the African wreaked upon the English language is, in fact, the metaphorical equivalent of the havoc that coming to the New World represented for the African.' In her poetry this linguistic and emotional havoc fuses with a judicious dose of discipline to create a thoughtful and resonant collection.

Politics ☆☆☆☆
Entertainment ☆☆☆ **UP**

Reviewers: Urvi Patel, Wayne Ellwood and Louise Gray

STAR RATING

Excellent	☆☆☆☆☆
Very good	☆☆☆☆
Good	☆☆☆
Fair	☆☆
Poor	☆

Reviews editor: **Vanessa Baird**

THE **CLASSIC**

Akhnaten

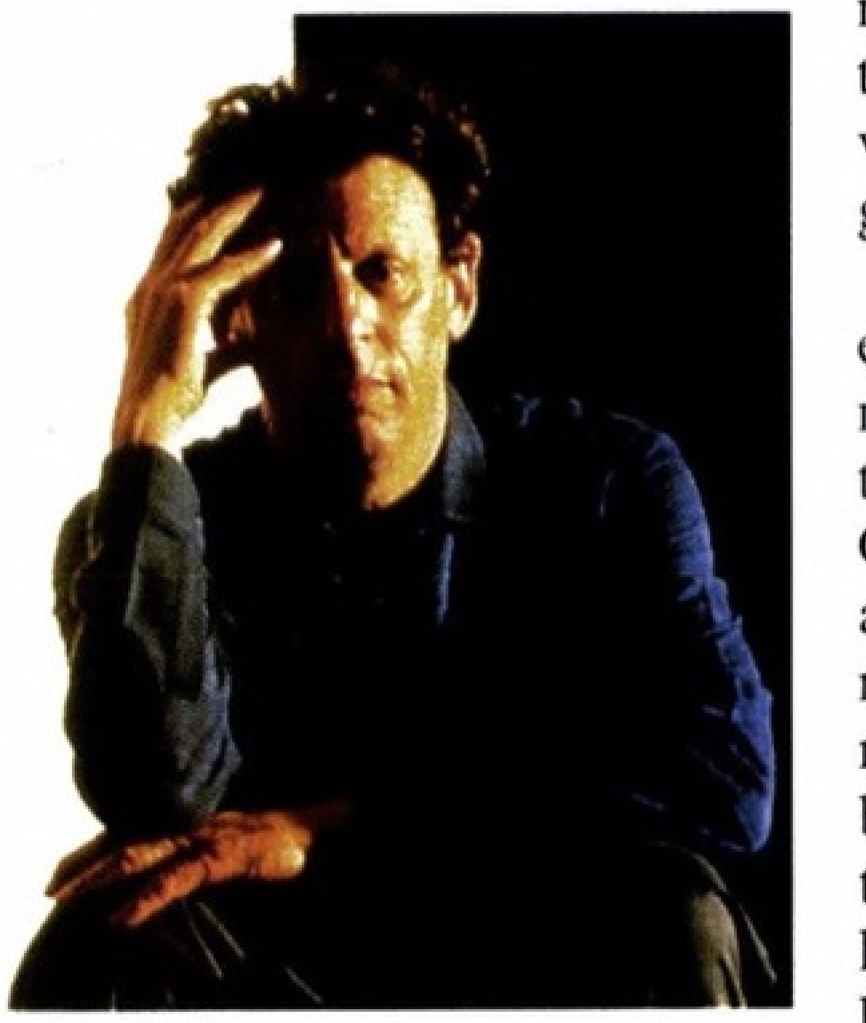
...being the opera that brings together a revolutionary ancient Egyptian pharaoh and a mould-shattering New York composer.

WHEN, IN 1982, New York composer Philip Glass began work on an opera which used as half its text a libretto in ancient Egyptian, those who knew his work were not really surprised. Previous operas in Glass' trilogy of 'portrait' operas had been equally adventurous in the linguistic department. *Einstein on the Beach*, a 1975 collaboration with theatre-director Robert Wilson, had used a babble of words and numbers that formed an oddly continuous whole. Its successor, *Satyagraha* had its focal character in Gandhi, even if its text was taken in its original Sanskrit from the Hindu religious epic, the *Bhagavad-Gita*. And now **Akhnaten**, an opera based on the 1300 BC pharaoh who, in the field of religion, was every bit as revolutionary as Einstein and Gandhi had been in their respective areas of science and politics. Akhnaten was the first monotheist, abandoning the Egyptian pantheon of deities in favour of one: Atun-re the sungod.

In musical terms, Glass is himself something of a revolutionary. Along with Terry Riley and Steve Reich, he was an exponent of a new form of avant-garde music which in the 1960s had shattered the domination that the strictly formulaic serialists had exercised over musical *conservatoires*. Not that minimalism – as the music written by these three came to be known – was any less formulist. Glass' early work presented certain patternings of notes over accentuated rhythms. There was a baroque elegance about these pieces, but it was also imbued with a more modern sensibility. Glass' speeding arpeggios transformed themselves over a series of repetitions in a compositional technique that he termed 'additive process'. **Akhnaten** marked a watershed for Glass in that it welded this harmony to rhythm. The new music appealed to a younger audience who wanted music of content matched with the dynamism that characterized rock.

The vocal character of the pharaoh, sung on the only recording of the work by Paul Esswood, was unique in itself. The few statues and pictures that remain of the historical Akhnaten depict a king in a way that stylized Egyptian art had never done before – or was ever to do again. The king has a slight build, he is round-shouldered and pot-bellied. Not only was the pharaoh avant garde in religious terms, he also, it seems, tried to introduce some verisimilitude into the representations made of him. Glass captures his unusualness by making the pharaoh a counter-tenor. There is a thrilling timbre about Esswood's voice. Counter-tenors have unusually high voices, but there is a quality about them that transcends considerations of masculinity and femininity. Esswood's Akhnaten has a regal power just because the voice is so markedly strange.

In the final scene, the ghosts of Akhnaten and his family wander through the modern ruins of the palace. Tourists amble about, realistically crass with their shorts, sunglasses and cans of Coke. The family sing wordlessly. In this there is a shocking, profound recognition. Language no longer has any mediating power. The horror of this loss, of language as the most vital abstraction that we take for granted, is overwhelming.



TONY CARAVAGLIA

Glass is not the only composer to hit upon a musical technique in an attempt to express the inexpressible. Neither is Glass the first composer to take an experimental approach to musical narrative. His achievement with **Akhnaten** goes beyond the music itself, even though some of the vocal parts here remain amongst the most beautiful and poignant that he has ever written. **Akhnaten** ends a trilogy of works which all share, as their common base, a fascination with the languages in which ideas are couched.

The unspoken question that **Akhnaten** offers is this: how do we remember that which is not capable of being expressed? This is a question whose relevance stretches from the personal to the political to the historical. Glass himself offers no easy answers. Soon after the ghostly pharaoh exits from the twentieth-century site of Tel-el Amarna, the opera ends, which is to say, the music lapses into silence. Silence, as Glass was well aware, does not necessary suggest a finality. Nearly 30 years before, John Cage – one of the most inventive experimental composers of modern times – wrote a notorious work entitled, simply, *4' 33"*. Capable of being arranged for any combination of instruments, *4' 33"* was just an interval of silence. No conventional music was played, but the music of chance – coughs from the audience, a shuffled chair, whatever – took on a new significance in the absence of any more organized sound. At the time, outraged audiences found Cage the very antithesis of music. This was to miss the point completely. If Cage's achievement was to draw attention to the framing of any musical event, then Glass' was to extend this concept. **Akhnaten** is the opera that frames the gap, and in doing so, brings us face to face with silence. ■

Louise Gray

Akhnaten by **Philip Glass** is available on Sony Masterworks.

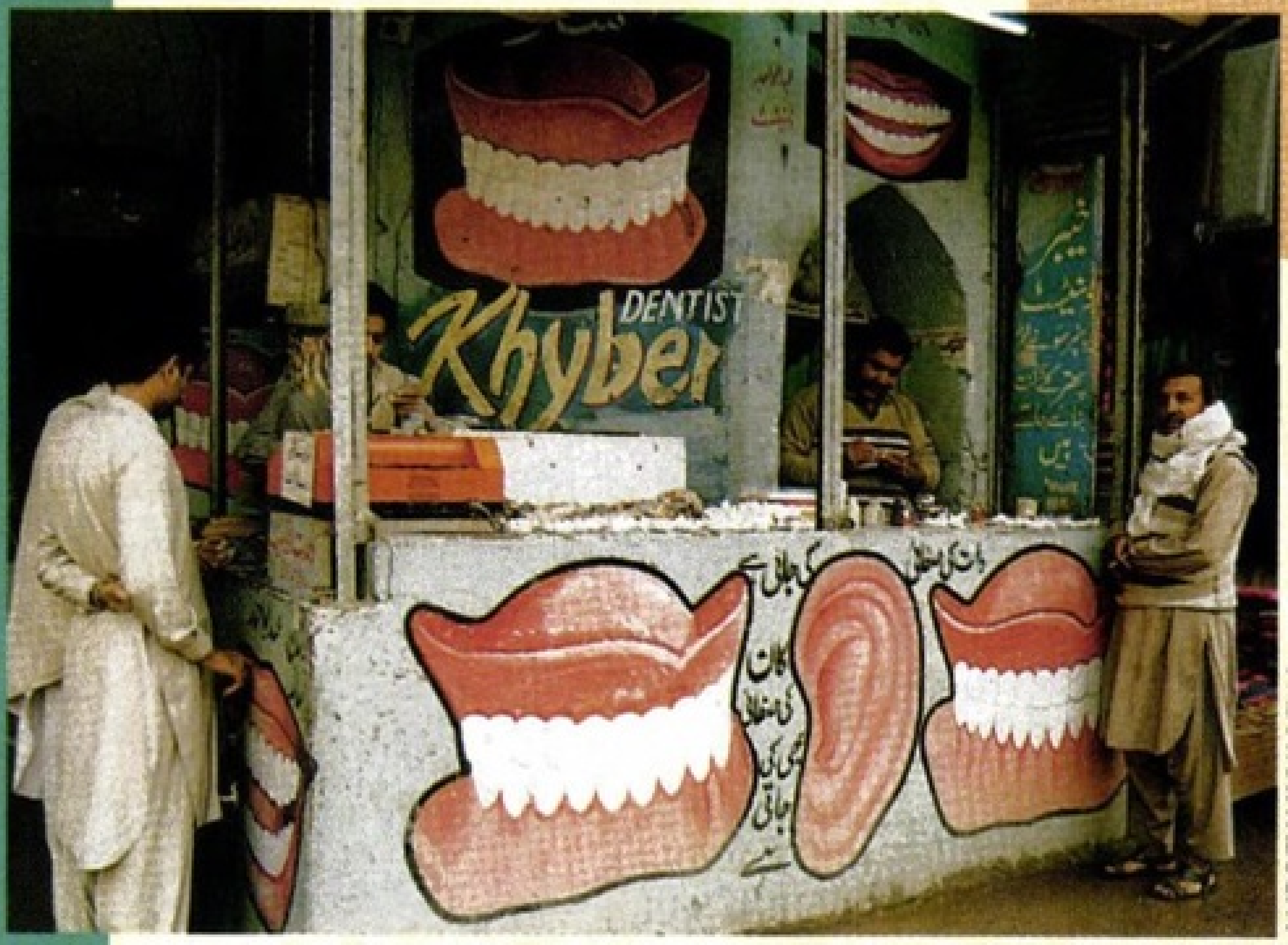
Curiosities

QUESTIONS THAT HAVE ALWAYS INTRIGUED YOU ABOUT THE WORLD WILL APPEAR IN THIS, YOUR SECTION, AND BE ANSWERED BY OTHER READERS. PLEASE ADDRESS YOUR ANSWERS AND QUESTIONS TO 'CURIOSITIES'.

What are the benefits or disadvantages of adding fluoride to tap water?

● Fluoride is a naturally occurring element that is found spontaneously in some water supplies. The effect of fluoride in water supplies on tooth decay was established in the 1930s. A survey of 21 American cities showed an inverse relationship between tooth decay and the concentration of fluoride in water.

The safety of water fluoridation has been endorsed by all major national and international bodies. At a conference on water fluoridation in June 1995 in Birmingham, England, the Chief Dental Officer of the World Health Organization described water fluoridation as the foundation-stone of its dental policy. Claims that fluoridation of public water leads to cancer and immunological damage have been thwarted by a mass of evidence to the contrary.



ANDREW KOKOTKA

Community water fluoridation provides the greatest benefit to those in the greatest need and has been proposed to be the most cost-effective preventative programme in healthcare.

It is an effective way of improving the world's dental health, even more salient for those who have no access to professional dentistry.

Ross Mc Kinlay BDS MDSc
Edinburgh, Scotland

● I am a dental surgeon in a very small minority indeed. I am a female living and working in the south west of Scotland, the area with the highest tooth-decay rate in Britain – but I am actively opposed to fluoridation of the water supply.

The advantage of fluoride is solely dental. The assimilation of the fluoride ion into developing tooth enamel has been proved to increase resistance to dental decay significantly. The disadvantage is that it is not only absorbed into teeth. It is absorbed into all developing tissues and it has not been proved to be as completely safe as the pro-lobby would have you believe. It is concentrated in bone and excreted by the kidneys and there is evidence that it enhances the risk of osteoporosis and kidney diseases.

The age-group targeted for treatment are the under-seven-year-olds. The dental tissues have completed mineralization by the time the first permanent molars have erupted. Further ingestion after age six has no effect on the teeth, therefore the administration of this drug to the general population via drinking water is criminal when there is little evidence that infants even drink tap water at all. All the ones I see in my practice are there because they drink 'juice'.

In conclusion my opinion is that administration of fluoride is a necessary adjunct to oral hygiene education in disadvantaged areas, but the decision to swallow it should be entirely voluntary. Topical preparations and dietary supplements are freely available; what is missing is public information.

Margaret S Herbertson BDS
New Cumnock , Scotland

● Research suggests that fluoride can cause a thickening of the bone around elderly people's hips, leading to fractures. Others have drawn links between fluoride and cancer. Large amounts can also cause children's teeth to become brown and mottled.

But I think the main objection to adding fluoride to tap water is the moral argument against 'mass medication'. If 50 per cent of the population is depressed should we be putting Valium in tap water? Similarly, with fluoride in tap water we are removing the element of choice and freedom.

Kevin Barnes Cleney
London, England

AWAITING YOUR ANSWERS

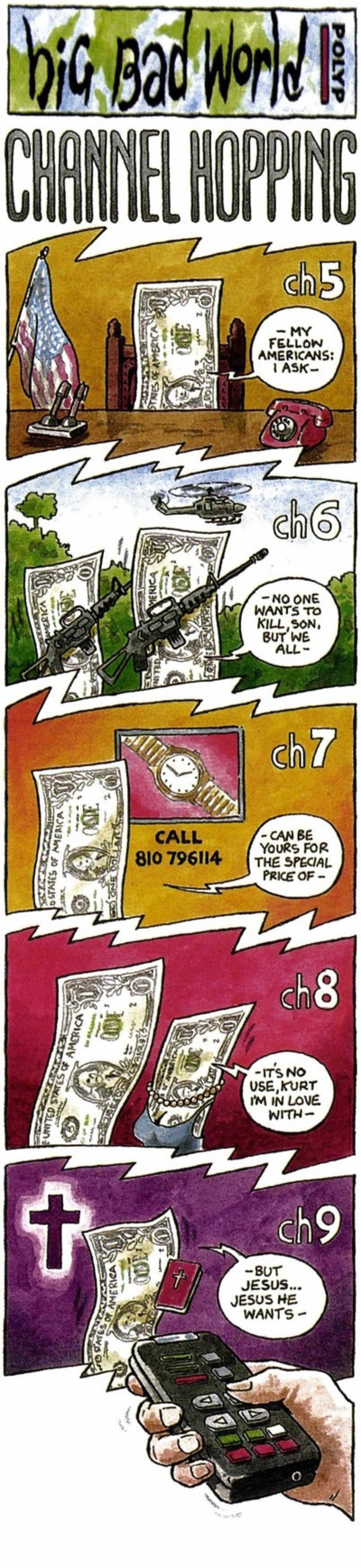
Why in most communities in the world do women live longer than men?

Eric Marsh,
Tasmania, Australia.

What proportions of the earth's arable land is currently used for the cultivation of drugs and stimulants, including coffee, tea, tobacco, grapes, hops, marijuana, coca and opium?

Klaus Graichen
London, England

IF YOU HAVE ANY QUESTIONS OR ANSWERS PLEASE SEND THEM TO **CURIOSITIES, NEW INTERNATIONALIST, 55 RECTORY ROAD, OXFORD OX4 1BW, UK,** OR TO YOUR LOCAL NI OFFICE (SEE INSIDE FRONT COVER FOR ADDRESSES).


big Bad World
POLYP
CHANNEL HOPPING
ch5
– MY FELLOW AMERICANS: I ASK –
ch6
– NO ONE WANTS TO KILL, SON, BUT WE ALL –
ch7
CALL 810 796114
– CAN BE YOURS FOR THE SPECIAL PRICE OF –
ch8
– IT'S NO USE, KURT I'M IN LOVE WITH –
ch9
– BUT JESUS... JESUS HE WANTS –

ENDPIECE

Screaming Silence

When journalist **Neil Christie-Ormond** was sent to cover the Biafra War in 1967 he had little idea that he was embarking on a career as a war correspondent, or where it would eventually lead.

I didn't realize how much anger I'd buried. Until I stopped what I was doing and experienced the release of big, powerful memories. Then began the terrifying journey to regain feelings, tears, laughter. It has taken a long time.

The seeds of my rage were planted almost 30 years ago. A recently qualified, ambitious journalist, I was on routine duty on the Foreign Desk of a 'quality' Sunday newspaper in London. The major spaces had been filled, advertising sales were pressing for the remainder, and almost everyone else had gone home. It looked like being a simple shift, with a welcome cool drink at day's end.

Suddenly every machine we had started chattering. I read the nearest tape: the Nigerian Federal Army had attacked across the northern border of the Eastern Province, to put down the self-declared independent state of Biafra, born just 38 days earlier and led by a Colonel Ojukwu.

I knew nothing of Nigeria, only aware of its bitter inter-tribal hatreds, a fast-expanding oilfield and strategic sensitivity. It didn't look good. I phoned around frantically, uncertain I could cope with something like this so soon. Nobody available but the reluctantly-disturbed Deputy Foreign Editor, who said 'Write a few terse paragraphs for the first edition and stay there for further instructions'.

Twenty minutes later I was on my way to an obscure provincial airport. I was going to Biafra. My brief: 'Follow Ojukwu around and send crisp despatches.' I was reminded of the notice on the newsroom wall: DO NOT GET EMOTIONALLY INVOLVED.

The hale and the not-so-hearty – Christie-Ormond after and before.

Soon after arrival I was stunned and totally involved emotionally. Everywhere the outstretched hands of silent, starving children. Their silence screamed. Poverty, desperation, fear. I dutifully began to 'describe' it, trying to stay detached.

The record tells what happened there, until the Biafran surrender in early 1970. An old siege strategy was coldly refined: the denial of nourishment as a legitimate weapon. Millions of noncombatants died slowly as the food to sustain them rotted, immobile outside the tightening cordon. 'Ethnic Cleansing' proceeded inexorably – although nobody used the term then – as the Ibo people were almost eliminated. I did follow Ojukwu, until he fled to a luxurious Gabonese beach house.

I made my first and biggest mistake in Nigeria. I turned into a war correspondent. From Africa I was sent straight to Vietnam. My 'unpatriotic' reporting forced me to leave my employer and become a media gypsy, a freelance. And so it went on. Conflict after conflict. Continent after continent. Never a shortage.

For some time I held out from becoming like the older hands. I would never drink all day, chain-smoke – be degraded. But soon I was with them, even willing to accept the tranquillizers liberally dispensed by medics everywhere. Feelings didn't hurt anymore.

I'd had the conviction that if I, and others like me, could keep the heat on for long enough everything would change. But I had overlooked the hidden, commercial interests and political bondage of most of the media. When I finally quit, three years ago, there were more conflicts involving more people than ever. I was shattered, spent, incredibly tired, empty.

I'm left now with two kinds of raw and painful memories. One of them causes overwhelming sadness, the other great rage.

There were some 23 correspondents who usually turned up at the main conflagrations. We became extremely close, more than family, frequently depending on each other for our lives. Only three of us are alive today. I can see them all – alive, courageous, hopeful...

Rage is for the arms sellers: virtually government representatives, key earners of foreign currency; encouraged, pampered, unbelievably well-rewarded. Typical of their trade is the following event.

The Middle East is jumpy again. A few of us are in a bar in Tel Aviv, alert. An unmistakable arms dealer arrives to meet a Defence Ministry official. We just overhear his third-drink clincher: 'The other side are getting the 105 mm guns from somewhere, but we could rush over the new 176 mm, on easy terms of course.' A few days later a Swedish colleague spotted the same gentleman in Alexandria, offering the Arabs something even bigger, better.

I later managed to get a dealer drunk. Well into his cups, and nearing very early retirement, he boastfully admitted that without larger, more widespread misery his profits would not increase. And, incredibly, he added: 'Naturally, the stimulation of hostilities in times of peace was a necessary evil.' Prime targets were unstable locations where the terrain called for 'sophisticated' hardware, reliance on costly spares, upgrading, training.

Horrifyingly, fleetingly, the global military-government-armaments conspiracy emerged. We quickly realized the truth about our own inability to influence or change anything. It was virtually impossible then to get a story about this activity printed anywhere significant. The conspiracy remains, sadly, more powerful today than ever.

Me? I've retrained as a healing therapist – starting with myself. I help people to repair their minds, bodies, spirits, to stay well. I'm through with watching people disintegrate.

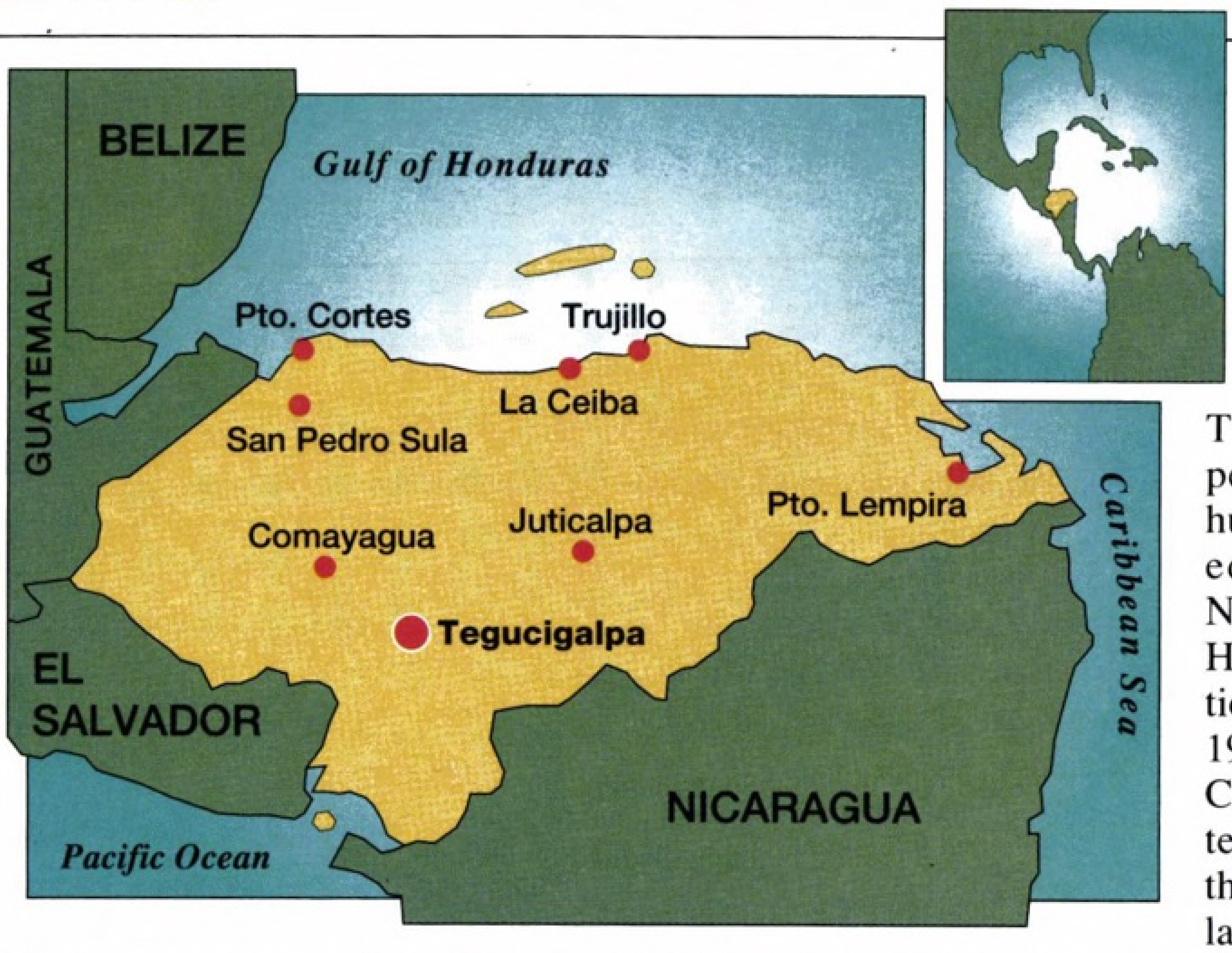
Now I'm raring to write again. But never in the old way, for *that* media, abused by the editors, proprietors, politicians. I'm interested again – just like before the nightmare began – in wonderful Earth, the only home I have; in saving the endangered, nourishing to new fruitfulness what is left, celebrating freedom and a life of peace.

Oh yes – and I'm still going to bring into the clear light of day any interests that exploit and enslave people to the terrible ends of politics, greed and profit. ■

Neil Christie-Ormond now lives in the English West Country.

Country profile

Honduras



In the Honduran town of La Ceiba, sweltering on the Caribbean coast, the US Standard Fruit Company has built a theme park. Ancient wooden banana wagons, like something out of Gabriel Garcia Marquez's *One Hundred Years of Solitude,* are tastefully arranged among the sprinklers on manicured lawns. A tooting Standard Fruit steam locomotive gives free rides through the town to excited hordes of Honduran schoolchildren.

Standard Fruit, along with the other US banana giant, United Fruit, dominated Honduras for much of this century, turning the country into the original 'banana republic'. Bananas still make up a third of all exports. The banana industry took precedence over national development, producing a country with little social or economic cohesion – there was no paved road joining the country's two main cities until the 1950s. The banana companies also fed the system of political corruption which has become a hallmark of Honduran public life. In the 1920s one banana baron boasted that 'in Honduras, a mule costs more than a deputy'.

Bananas made fortunes for the US companies, but did little for most Hondurans. The country has always been the poorest in Central America (at least until Nicaragua's spectacular economic collapse in the mid-1980s). Three-quarters of the population struggle through life below the poverty line and Honduras exhibits acute forms of many of Latin America's traditional ills: highly unequal ownership of land provokes regular conflicts between peasants and large landowners in the countryside, while landless peasants flow into the cities to swell the expanding shanty towns. One new twist has been added to such problems – Honduras has become the AIDS capital of Latin America, with 100,000 people estimated to be HIV-positive.

In the 1980s, Honduras found itself caught up in Cold War politics, as Ronald Reagan chose it as a launching pad for his attempts to destabilize the Sandinista government in neighbouring Nicaragua. For much of the decade, 40,000 so-called 'Contras' and their families were based inside Honduras, funded and trained by the US. They launched raids over the border into Nicaragua, helping to precipitate an economic collapse which eventually led to the Sandinista electoral defeat in 1990.

Within Honduras the Contra war strengthened the political influence of the military, who developed a taste for the kind of human-rights violations practised by their more bloodthirsty colleagues in Guatemala and El Salvador. Two hundred activists 'disappeared' during the decade and hundreds more were assassinated. The US fixation with Nicaragua at least allowed Honduras to fend off the attentions of the IMF for much of the 1980s. In return for allowing the Contra rebels to operate from its territory, Washington rewarded the Honduran Government with large slices of aid.

From 1986 onwards, however, the Contra war began to tail off and US aid fell away, forcing Honduras to turn to the IMF and World Bank, who made their loans conditional on the Government introducing market reforms. These have attracted an influx of foreign investment in the form of numerous *maquiladora* assembly plants, as companies have moved in to take advantage of Honduras' low wages (48 cents an hour in 1991). This time, however, the investors are not from the US – they are from Taiwan and South Korea. ■

Duncan Green

AT A GLANCE

PETER STALKER

Leader President Carlos Roberto Reina (took office in 1994).

Economy GNP per capita $580 (US $23,240)
Monetary unit: Lempira
Main exports: Bananas, coffee, shrimp, maquiladora products
Main imports: Manufactured goods, fuel
External debt: $3.9 billion (1994)
Despite attempts to diversify, bananas and coffee are still the largest exports. Food production has fallen in recent decades as Honduras has become more dependent on food imports from the US.

People 5.7 million. Population growth rate of 2.8% per annum.

Health Infant mortality 61 per 1,000 live births (Canada 7 per 1,000)

Culture Population is largely Spanish-speaking *mestizo* (mixed indigenous and Spanish). Of the remainder, most are pure indigenous, with a small Afro-Caribbean community distributed along the North Coast.
Religion: Largely Roman Catholic, though 15% of Hondurans are now believed to have converted to the new evangelical Protestant sects.
Languages: Spanish, Mayan Indian languages; Black population speaks English, English-Creole or Garifuna.

Sources: *World Bank; UNDP; Economist Intelligence Unit; Latin America Monitor; Save the Children Fund.*

Previously profiled August 1981

NI star rating

EXCELLENT	★★★★★
GOOD	★★★★
FAIR	★★★
POOR	★★
APPALLING	★

STAR RATINGS

INCOME DISTRIBUTION

★

Richest fifth earn 24 times more than poorest fifth.

1981 ★

SELF-RELIANCE

★★

Increasingly dependent on imported food and fuel. Over half of its trade is with US.

1981 ★★

POSITION OF WOMEN

★★

Machismo largely unchallenged, despite long-standing women's movement.

1981 ★★

LITERACY

★★★

27% of adults judged illiterate. Number is falling, but progress undermined by high drop-out rate among schoolchildren.

1981 ★★

FREEDOM

★★

Although human-rights violations are not as bad as in other Central American republics, the military still largely enjoys impunity, while the media routinely practises self-censorship.

1981★★

LIFE EXPECTANCY

★★★

65 years. Compares with a rich-world average of 76.

1981★

POLITICS

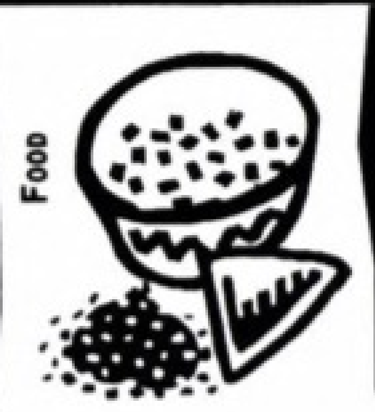
NI ASSESSMENT ★★

Honduras has endemic corruption in government and a two-party system built around personalities rather than any great policy differences. The Honduran military and the US Embassy are both highly influential (and unaccountable). Popular movements that might provide a check on official abuses and foster democratic health are fragmented.

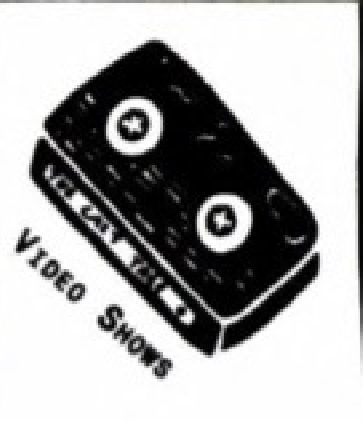
Global Xmas Market

Film Festival

Live World Music



International Book Fair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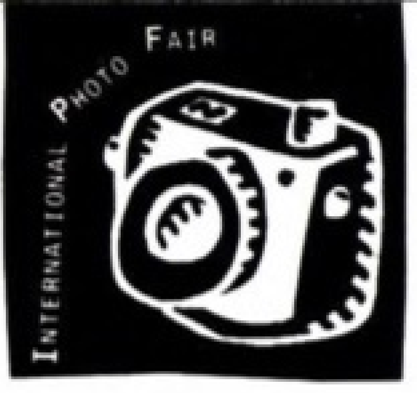
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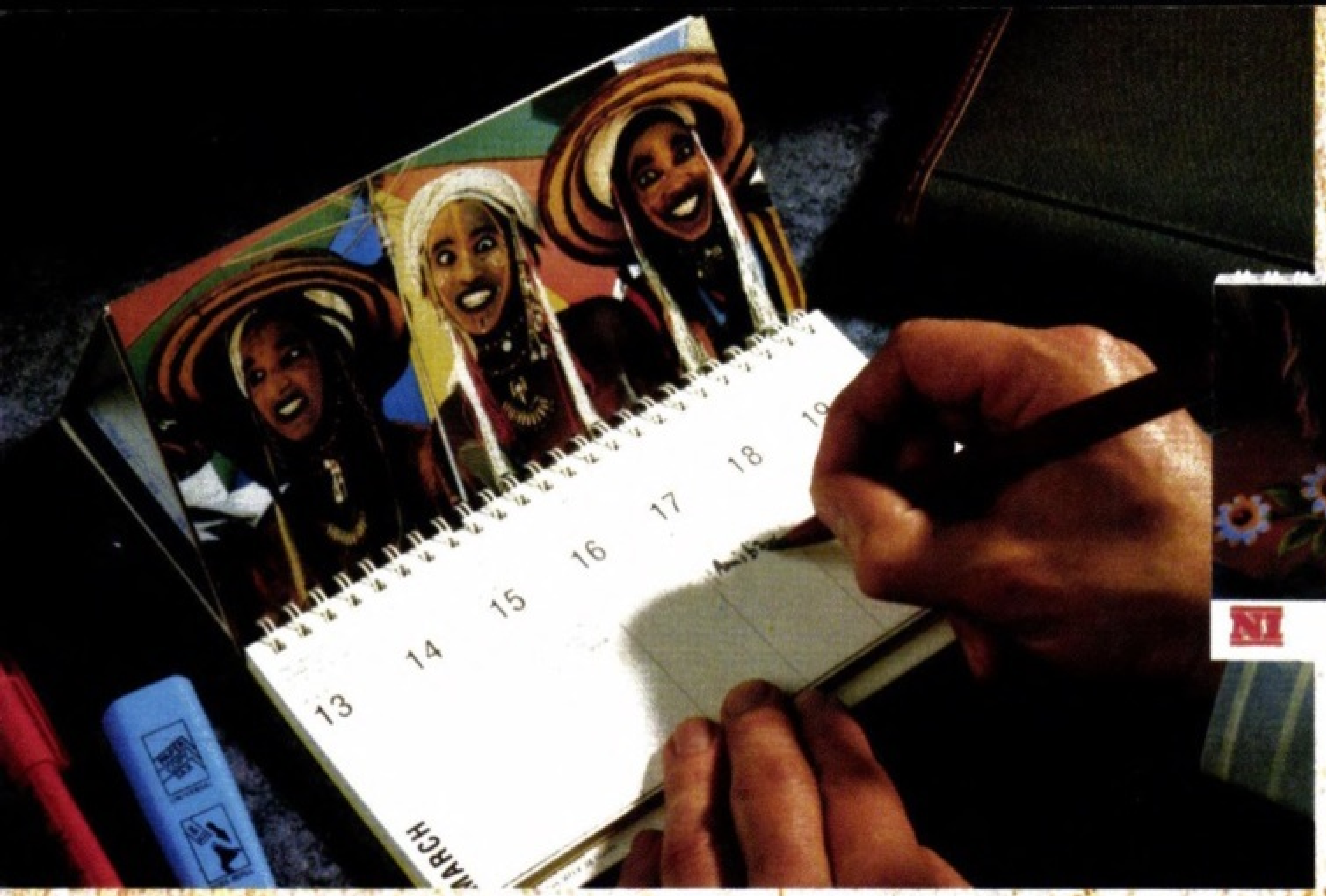

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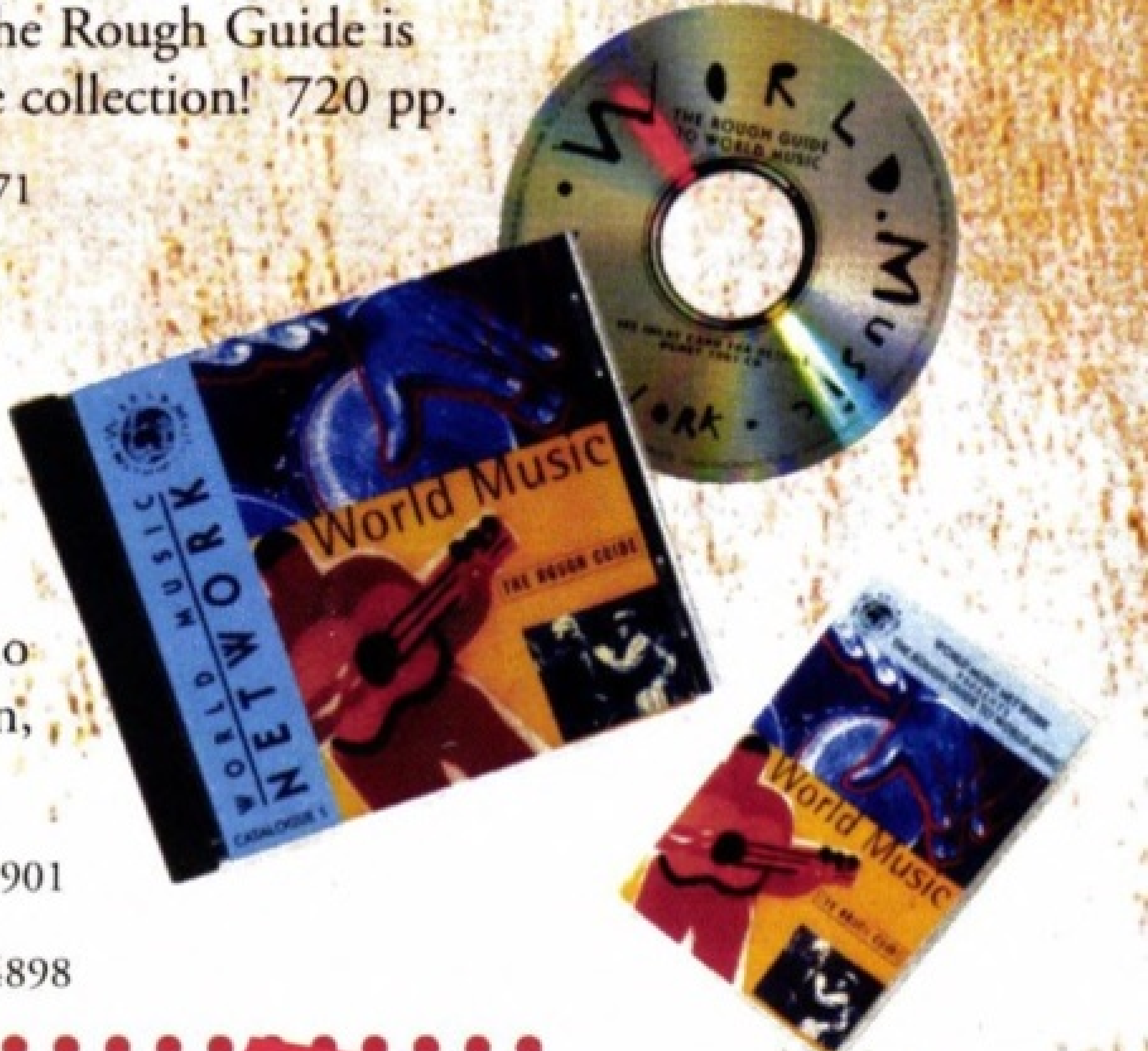

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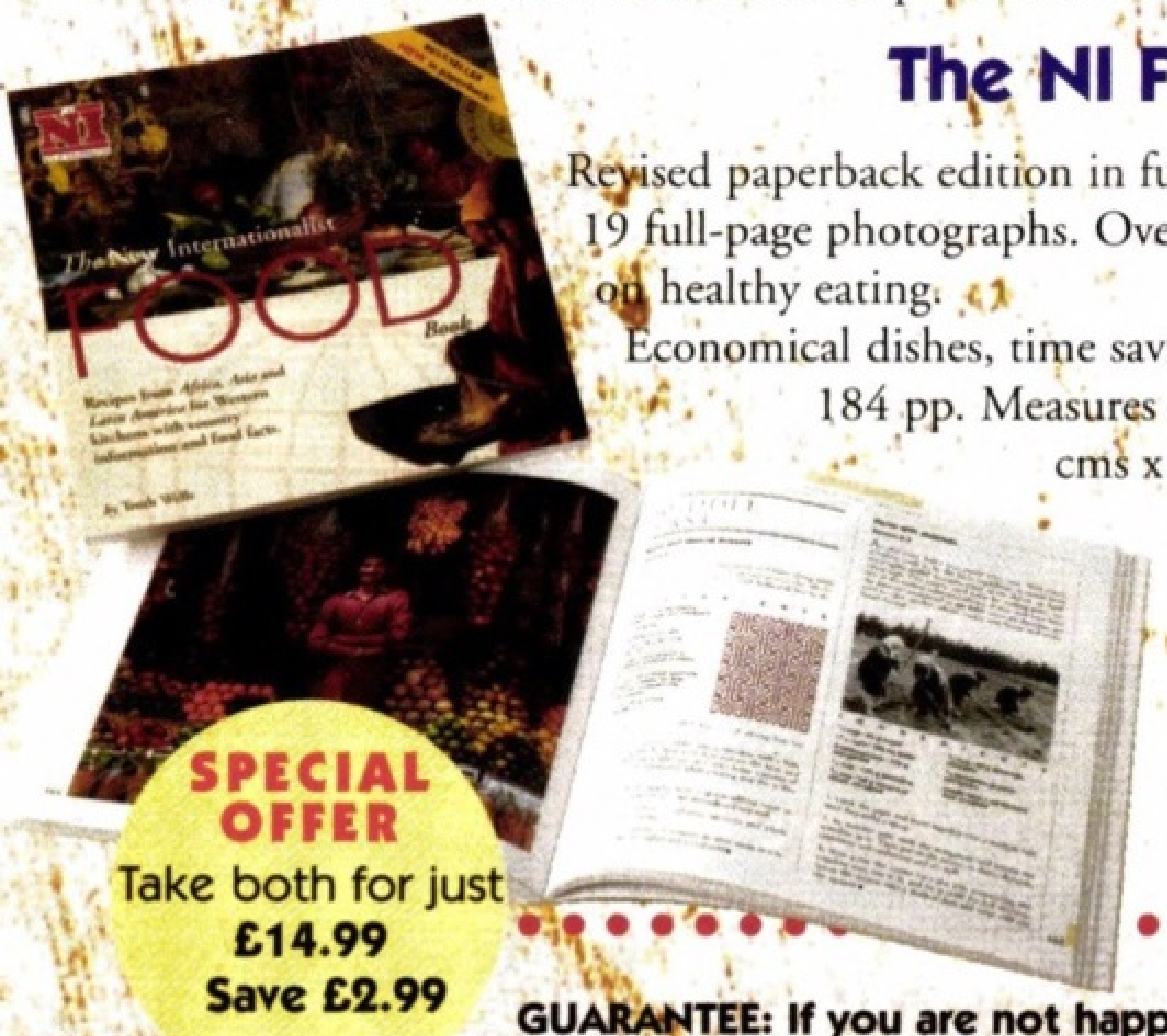

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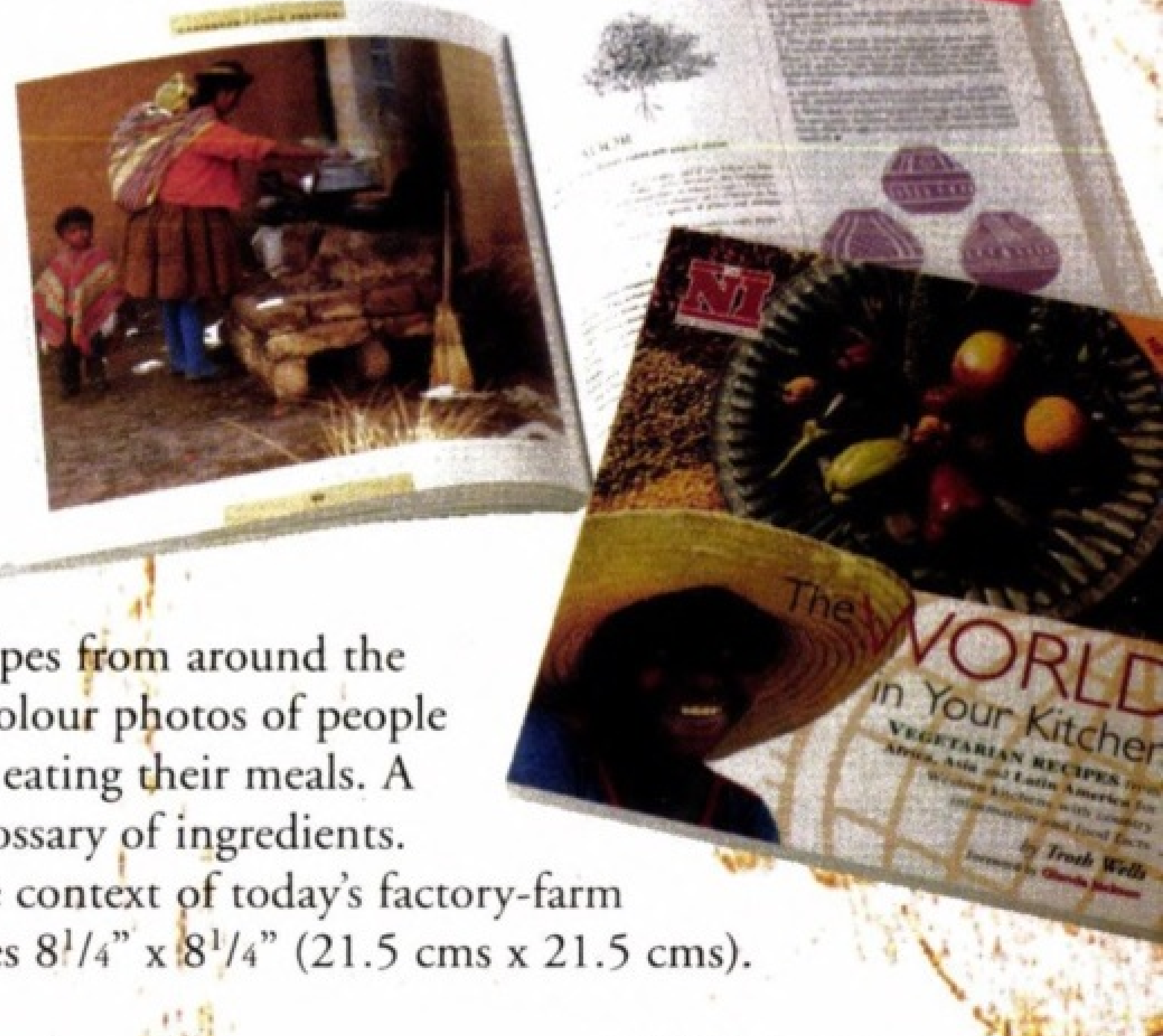

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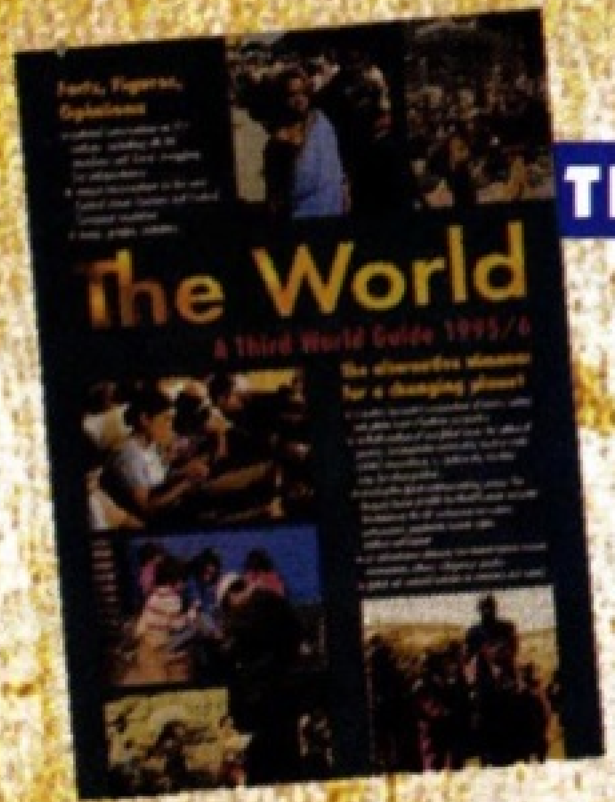

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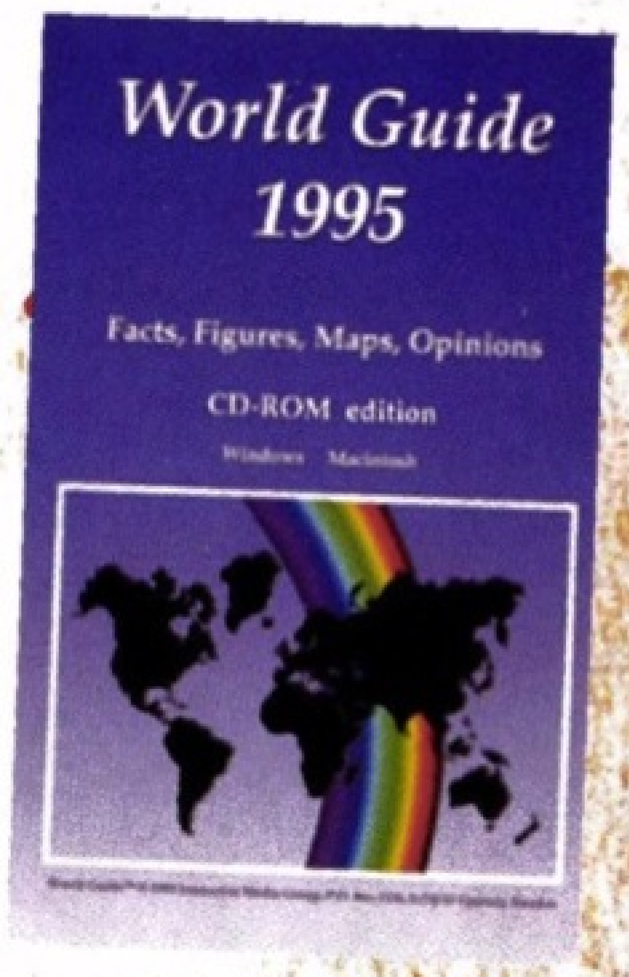

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